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ARCHEOLOGICAL AND HISTORICAL INVESTIGATIONS OF FOUR PROPOSED REVETMENT AREAS LOCATED ALONG THE MISSISSIPPI RIVER IN SOUTHEAST LOUISIANA

Final Report

October 1989

COASTAL ENVIRONMENTS, INC.
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504-383-7455

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Archeological and historical investigations of four proposed revetment areas located along the Mississippi River in southeast Louisiana are described. Information is presented on the history of land ownership and use within each of the areas as well as the results of archeological survey there.

Survey of the Arrow Bend Revetment area located a number of modern camp structures in its upstream segment and three recent farm buildings in its downstream segment. None of these were considered significant.

Fieldwork within the Manchac Revetment area located two historic sites, 16 EBR 70 and 16 EBR 71, and reexamined two previously recorded sites, 16 EBR 40 and 16 EBR 56. Site 16 EBR 70 consists of a concrete machinery foundation which was not in situ. Site 16 EBR 71 contains evidence of a late-eighteenth/early-nineteenth century occupation and a late-nineteenth/early-twentieth century occupation. A small area of intact deposits was associated with the latter component. Neither 16 EBR 70 nor 16 EBR 71 was considered significant. Test excavations at 16 EBR 40 indicate that the Rangia shell there was recently introduced into the area as road fill. Examination of historic maps indicated that the former location of the structure recorded as 16 EBR 56 lies in a borrow pit. No trace of this site was found during the survey. None of these sites were considered significant.

Survey of the Marchand Revetment area located six historic sites, 16 AN 45, 16 AN 46, 16 AN 47, 16 AN 48, 16 AN 49, and 16 AN 6. All of these are associated with houses which were part of a small community located in this area at the end of the nineteenth and early-twentieth centuries. One of the sites was located near the surface, but the remainder are deeply buried by historic crevasse deposits. None of the sites was considered significant.

Fieldwork within the Aben Revetment area located three historic sites, 16 AN 42, 16 AN 43, and 16 AN 44. The first of these, 16 AN 42, consisted of the remains of irrigation structures and other features associated with Dugas Plantation. The irrigation structures were documented and no further work is considered necessary on them. The remainder of the site has a limited research potential and is not considered significant. Site 16 AN 43 consists of intact structural remains and deposits associated with a sawmill located on Stella Plantation during the late-nineteenth century. The site was considered potentially significant, and further testing is recommended. The final site, 16 AN 44, consists of an in situ concrete machinery foundation associated with a late-nineteenth century structure on Riverside Plantation. No associated cultural deposits were located, and the site was not considered significant.

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DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
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REPLY TO
ATTENTION OF:

October 25, 1988

Planning Division
Environmental Analysis Branch

To The Reader:

This report of survey and site inventory was prepared for the U. S. Army Corps of Engineers, New Orleans District in advance of construction of four revetment items along the Mississippi River in West Feliciana, East Baton Rouge and Ascension Parishes, Louisiana. Thirteen historic archeological sites were identified adjacent to the river channel. Twelve of these were assessed to be nonsignificant. Site 16AN43, however, requires additional testing to formally establish its eligibility to the National Register of Historic Places. The State Historic Preservation Officer concurs with these findings and interpretations.

Construction of Arrow Bend, Manchac and Marchand Revetments may proceed without the need for further investigation at sites 16AN6, 16AN42, 16AN44, 16AN45, 16AN46, 16AN47, 16AN48, 16AN49, 16EBR40, 16EBR56, 16EBR70, and 16EBR71. Site 16AN43 will be protected from construction of Aben Revetment until its eligibility has been established and appropriate mitigation measures have been taken.

Carroll H. Kleinhans
Technical Representative

Michael E. Stout
Authorized Representative
of the Contracting Officer

Robert A. Buisson, Jr.
Acting Chief, Planning Division

ARCHEOLOGICAL AND HISTORICAL INVESTIGATIONS OF FOUR PROPOSED REVETMENT AREAS LOCATED ALONG THE MISSISSIPPI RIVER IN SOUTHEAST LOUISIANA

By
David B. Kelley

Performed under contract with
U.S. Army Corps of Engineers
New Orleans District
Contract No. DACW 29-86-D-0092,
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Coastal Environments, Inc.
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Baton Rouge, Louisiana 70802

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The author wishes to acknowledge the assistance of a number of individuals in the conduct of this research. Ms. Carroll Kleinhans of the New Orleans District, Corps of Engineers, oversaw the project for the Government and provided information and assistance throughout the study. Mr. William Stuart Roberts and Mr. Richard Lopez carried out the title research for the Manchac and Aben Revetment areas, and Mr. William Flores provided assistance with the archival research on all of the areas. The fieldwork was directed by the author with the assistance of Mr. Thurston Hahn, III. Field crew members included Mr. William Flores, Mr. Xu Jingxuan, Mr. David Willis, and Ms. Rachel Power. Mr. Hahn and Ms. Power analyzed the artifacts. The figures were drafted by Mr. Curtis Latiolais and Mr. Donald Hunter, and Ms. Linda Abadie typed and edited the report.

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CHAPTER 1: INTRODUCTION

This report presents the results of archeological and historical research conducted on four proposed revetment areas located along the Mississippi River in southeast Louisiana (~~Figure~~ 1). The research was carried out by Coastal Environments, Inc. (CEI) under contract to the U.S. Army Corps of Engineers, New Orleans District. The northernmost revetment area, Arrow Bend, consisted of two segments located along the left descending bank of the river in West Feliciana Parish. The second revetment area, Manchac, was located on the left descending bank in East Baton Rouge Parish. The third and fourth areas, Marchand and Aben, were situated on the left descending bank and the right descending bank, respectively, in Ascension Parish. Construction of the revetments will involve clearing and grading the bankline to a stable slope and then laying an articulated concrete mattress from the low water line into the river channel. This may impact an area 200 to 300 ft (61.0 to 91.4 m) back from the water's edge and as much as 10 ft (3.0 m) below the surface. In addition, the ground surface beyond 300 ft from the bankline may be disturbed by movement of heavy equipment. The total area examined by the present surveys was 303.9 ac (123.1 ha).

The scope of services for the present study called for intensive surveys of the revetment areas; assessment of the significance of any cultural resources located; relocation and assessment of a previously recorded site, 16 EBR 40; evaluation of potential impacts to the cultural resources; and recommendations for the treatment of significant resources. The proposal submitted by CEI in response to this scope of work suggested a three-phase investigation. The first involved a review of the pertinent literature on the geology, history, and archeology of the region encompassing the four revetment areas and more detailed archival research on the history of land ownership and use within each area. The second phase of the study consisted of the archeological fieldwork, and the third involved analyses of the various types of data recovered and preparation of a report of findings. However, because of the limited time schedule for the project, it was necessary to carry out portions of the first and second phases of the research concurrently. Archival research began in April 1988 and continued intermittently into June. The fieldwork began in late April and was completed in early June. Analysis and report preparation took place during June and early July.

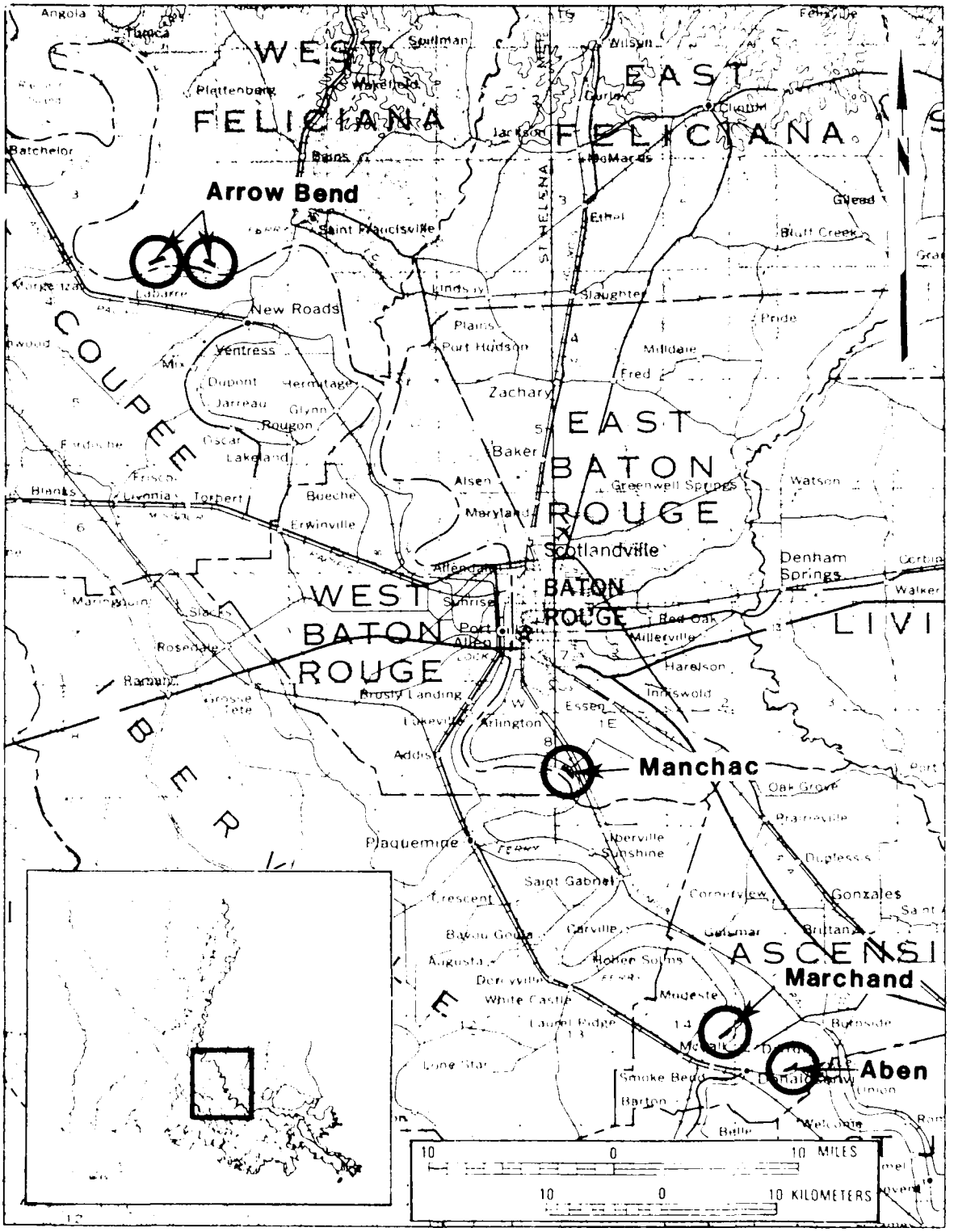


Figure 1. Location of the Arrow Bend, Manchac, Marchand, and Aben Revetment areas along the Mississippi River.

CHAPTER 2: ENVIRONMENTAL SETTING

This section presents a brief overview of the environment of the Lower Mississippi Alluvial Valley in order to provide a background for understanding past human adaptations to the area. The specific environmental conditions encountered in each revetment area will be discussed later in a section on the results of the research.

Geology and Geomorphology

The four revetment areas examined in the present study are located along the alluvial valley of the Mississippi River near its boundary with the deltaic plain (Saucier 1974:12). The Quaternary geology of the Lower Mississippi River Valley has been the subject of considerable research over the past 50 years. Fisk (1944) and Saucier (1974) have synthesized the results of the research both in terms of the nature of the deposits present and their age. Much of Fisk's work has withstood the test of time, but his chronology, developed prior to the advent of radiocarbon dating, has been revised substantially. Saucier's (1974) more recent summary, although now almost 15 years old, provides the best available information on the age of the fluvial features present.

The alluvial valley of the Mississippi River consists of the Holocene floodplain and a series of Pleistocene terraces which represent earlier floodplains or deltaic plains. All of the present revetment areas lie within the Holocene floodplain, so the following discussion will focus on this area.

Present within the floodplain of the river are its current meander belt, portions of relict meander belts, and backswamp areas. Each meander belt consists of the landforms created by the river while it occupies a single course. Saucier (1974) has identified a sequence of five major meander belts of the Mississippi River extending over the past 9000 years, but only the two most recent of these, Nos. 4 and 5, are present in the vicinity of the proposed revetments. Meander belt No. 4 began forming approximately 4800 years ago as a result of two major channel diversions from meander belt No. 3 in the area of Memphis, Tennessee (Saucier 1974:21). These diversions produced two partial-flow courses, one which followed the eastern valley wall and a second which followed the present course of the river to about the latitude of Vicksburg and then flowed west of the modern river. The two courses apparently rejoined just below the mouth of Red River and then followed the modern course south of Baton Rouge.

At present, remnants of meander belt No. 4 are exposed at the surface along the eastern side of the alluvial valley from Clarksdale, Mississippi to Vicksburg and west of the modern river from Vicksburg to the mouth of Red River (Saucier 1974:Fig. 1). Downstream from there, in the vicinity of the present revetment areas, they have been buried by deposits of the current meander belt, No. 5, which began forming approximately 2800 years ago (ibid:22). Saucier (1969) has identified what may be portions of meander belt No. 4 in borings from this area. Along the margins of the current meander belt they occur within 3 m of the surface, but near the present channel of the river they are buried from 10 to 20 m beneath the surface. Therefore, the near-surface deposits in the present revetment areas should be associated with the current meander belt and less than 2800 years old.

Each meander belt contains a variety of depositional environments, including natural levees, point bars, and abandoned channels. Natural levees are low ridges formed by overbank deposition along both sides of an active channel. In the vicinity of the

present revetment areas they are composed predominantly of oxidized silts, silty clays and clays, and may rise 5 to 6 m above the adjacent backswamps. They provided and continue to provide the highest and best-drained land within the floodplain.

Point bars are arcuate deposits which form on the convex side of meanders as a result of lateral migration of the channel. They consist of alternating sandy ridges and clay-lined swales deposited during high and low stages, respectively. Along much of the Lower Mississippi River Valley, point-bar deposits are extensive, comprising a large portion of the floodplain. However, in the vicinity of the present revetment areas, the lateral migration of the river is greatly reduced, and the point-bar deposits are consequently of limited extent.

Abandoned channels are meanders which have been cut off from the river by lateral migration. Initially, they may contain oxbow lakes, but gradually they fill with fine-grained sediments until they are at or near the surrounding floodplain level. Due to the reduced lateral migration in the present region, abandoned channels are only present north of Baton Rouge.

Outside of the meander belts are low-lying backswamp areas which slowly fill with fine-grained sediments deposited after flood events. In much of the Lower Mississippi Valley they are relatively limited in area because of the number of relict meander belts present; however, in the present region they make up the great majority of the floodplain.

Since the construction of artificial levees along the active channel of the Mississippi River, another type of deposit has begun to form on the "batture" or river side of these features. These are overbank deposits which are typically composed of silts, sandy silts, or silty clays and may reach thicknesses of several meters.

Vegetation

Prior to extensive clearing of the Mississippi River floodplain for agriculture during the eighteenth and nineteenth centuries, it supported a vast bottomland hardwood forest. The forest was characterized by a relatively low species diversity, but it exhibited a complex mosaic of plant communities whose distribution was controlled by slight changes in frequency of inundation and sediment type (Putnam and Bull 1932). Riverbank communities were dominated by willow (Salix spp.) and cottonwood (Populus deltoides), while the lower slopes of natural levees and the better-drained portions of backswamps included stands of sweetgum (Liquidambar styraciflua) and the more water-tolerant species of oaks (Quercus pagota, Quercus prinus, and Quercus nigra). The higher and better-drained natural levees supported communities of the less water-tolerant oaks (Quercus alba, Quercus stellata) and hickories (Carya spp.). Permanently flooded portions of the backswamp and the margins of oxbow lakes included communities of bald cypress (Taxodium distichum) and water tupelo (Nyssa aquatica).

CHAPTER 3: PREVIOUS ARCHEOLOGICAL RESEARCH AND REGIONAL CULTURE HISTORY

The following summary of previous research in the vicinity of the four proposed revetment areas focuses on studies conducted in the Mississippi River floodplain since it is the location of the present research. The earliest investigations conducted in this area were the joint LSU-WPA excavations at the Medora site in West Baton Rouge Parish in late 1939 and early 1940 (Quimby 1951), and the Bayou Goula site in Iberville Parish in 1940 and 1941 (Quimby 1957). These provided much of the available information on late prehistoric culture in the region. After this early work there was a lapse in archeological research in this area until the beginning of Federally funded contract archeology in the middle 1970s. Since that time, numerous surveys and test excavations have been conducted along the river.

Previous research in the vicinity of the Arrow Bend Revetment area in West Feliciana Parish consists predominantly of surveys which have often failed to locate cultural resources (e.g. Stuart and Greene 1983). One exception is a pipeline survey conducted by CEI, which located a portion of the former river town of Waterloo in Pointe Coupee Parish (Gagliano et al. 1976). In another study in this vicinity, Goodwin and Associates, Inc. carried out test excavations at Lakeland Plantation in Pointe Coupee Parish (Goodwin et al. 1983).

Considerably more research has been conducted in the vicinity of the Manchac revetment area in East Baton Rouge Parish. One of the earliest projects was a reconnaissance survey of proposed levee enlargement and bank paving areas by Shenkel (1976). A short distance north of the present revetment area he located a surface scatter of Rangia shells with two prehistoric pottery sherds which he recorded as site 16 EBR 40. Although situated outside of the proposed revetment area, the site may be impacted by equipment movement; therefore, the present investigation was to assess its significance. Other early studies in this area include test excavations at the Woodstock Plantation Landing by CEI (Gagliano et al. 1977) and a survey of a proposed borrow pit which resulted in the location of a portion of Hollywood Plantation (Glander and Gagliano 1977). Test excavations were later conducted at the latter site by Goodwin and Associates, Inc. (Goodwin et al. 1983). More recently the same firm carried out archival research on several sites, including Mount Pleasant Plantation, in the right-of-way of the Faulkner Lake Revetment in the northern portion of East Baton Rouge Parish (Poplin and Goodwin 1986).

Previous research in the vicinity of the Marchand and Aben Revetment areas in Ascension Parish includes an overview of the potential for archeological sites in the city of Donaldsonville conducted by CEI in 1980 (Castille 1980a) and a survey of the proposed IT hazardous waste facility by Heartfield, Price and Greene, Inc. (1980) in that same year. The following year CEI conducted a survey of a proposed coal transfer facility which crossed portions of Hermitage Plantation (McCloskey et al. 1981). In 1983 Guevin (1983) identified the site of a historic Houma Indian village, 16 AN 35, as part of the research for his Master's thesis at Louisiana State University. More recently Goodwin and Associates, Inc. has carried out surveys of the Burnside revetment area (Goodwin et al. 1986) and a portion of the Marchand Revetment area located upstream from the present project area (Goodwin et al. 1985).

Regional Culture History

Figure 2 provides an outline of our current understanding of the sequence of cultural development in southern Louisiana. The phases listed for the Eastern Area are

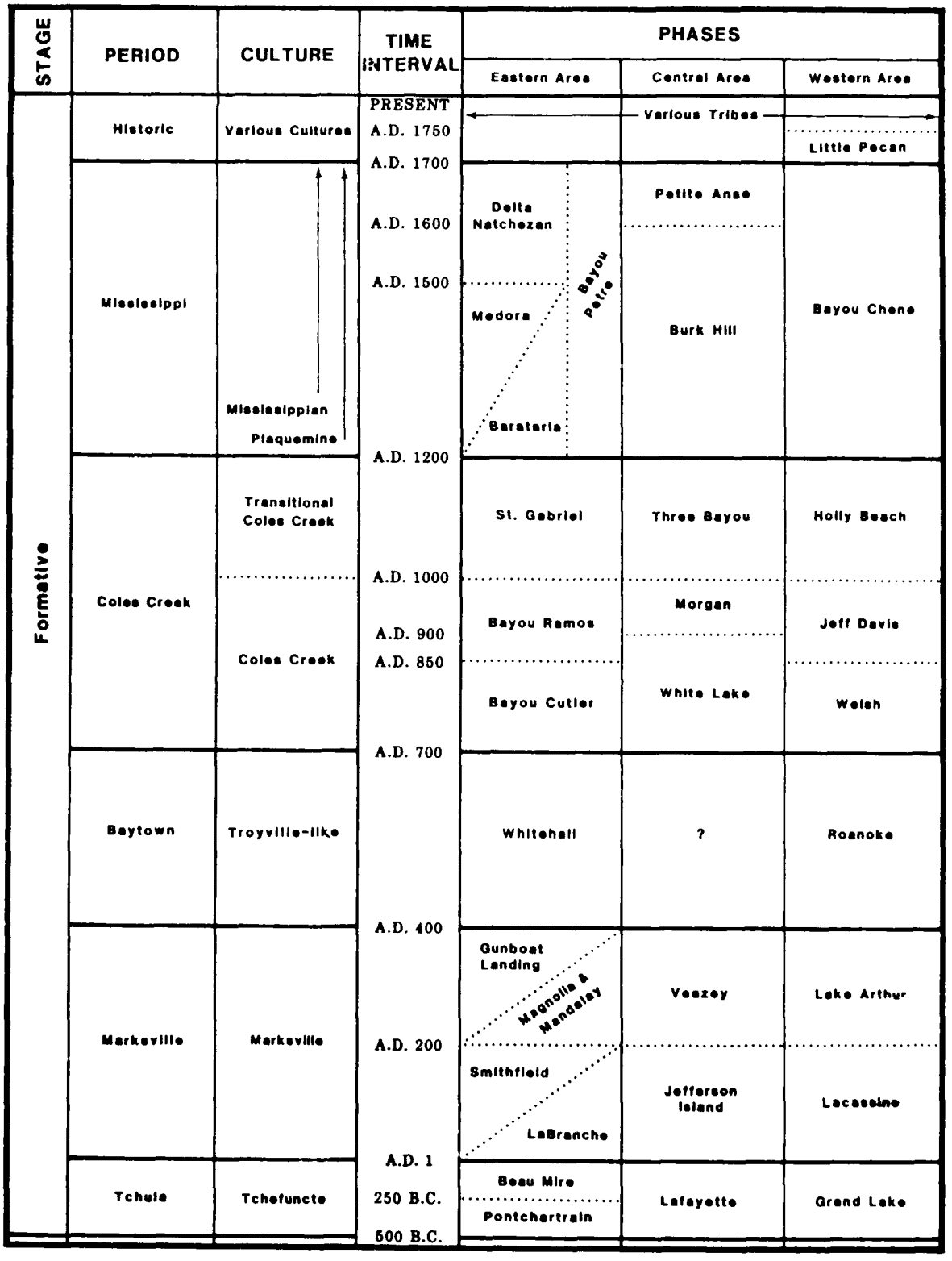


Figure 2. Cultural chronology for south Louisiana.

STAGE	PERIOD	CULTURE	TIME INTERVAL	PHASES		
				Eastern Area	Central Area	Western Area
			500 B.C.			
Archaic	Poverty Point	Poverty Point		Garcia	Beau Rivage	
			1000 B.C.			?
				Bayou Jasmine	Rabbit Island	
			1500 B.C.			
	Late Archaic			Pearl River	Copell	Bayou Blue
			3000 B.C.			
	Middle Archaic	Archaic		Monte Sano	Banana Bayou	?
				Amite River		
			5000 B.C.			
	Early Archaic			St. Helena	?	?
			6000 B.C.			
Lithic	Late Paleo	Paleo-Indian		Jones Creek	Vatican	Strohe
			8000 B.C.			
	Early Paleo			?	Avery Island	?
			10,000 B.C.			
	Pre-Projectile Point	?		?	?	?
			?			

Figure 2 continued.

relevant to the vicinity of the present revetment area. Although the near-surface deposits in the revetment areas are less than 2800 years old, the following summary will begin with the earliest archeological remains from the region.

Paleo-Indian Period, Prior to 6000 B.C.

Initial human occupation of this region occurred in the Paleo-Indian period. Archeological evidence from other portions of North America suggests that the populations involved were probably small bands of hunter-gatherers adapted to terminal Pleistocene or very early Holocene environments. The early portion of the period is characterized by the widespread fluted-point tradition generally dated prior to 8500 B.C. Gagliano (1963:112) notes that a few of these points, resembling the type Clovis, have been found in the Florida parishes, and that they are generally made of exotic materials.

The later portion of the Paleo-Indian period is marked by the divergence of the fluted-point tradition into distinct subtraditions. One of these includes Scottsbluff and similar point types which appear to have a predominantly western distribution. Another of the subtraditions includes Dalton and related projectile points found widely throughout the southeast and midwest. Goodyear (1982) has argued that the Dalton horizon dates from approximately 8500 to 7900 B.C., and that it represents an adaptation to the changing environments found at the end of the Pleistocene. One indication of this is the addition of a heavy woodworking tool, the Dalton adz, to an otherwise Paleo-Indian tool kit. A related complex found primarily in northern Louisiana, eastern Texas, and southern Arkansas includes the San Patrice point, an associated side-notched point and the distinctive "Albany Scraper" (Webb et al. 1971). Within southeast Louisiana Weinstein, Burden, and Gagliano (1977:3) have proposed the Jones Creek phase based on finds of Plainview, Dalton, and San Patrice points at the Jones Creek (16 EBR 13) and Blackwater Bayou (16 EBR 33) sites in East Baton Rouge Parish.

Early Archaic Period, 6000-5000 B.C.

In much of eastern North America, the Early Archaic period represents a time of adaptation to the changing environments associated with early post-glacial climatic regimes. The available palynological evidence indicates that the present region lies beyond the southern boundary of boreal forest expansion, suggesting that the transition to Holocene climatic conditions may have been much less marked there than further north. While there is a distinct technological break with the earlier fluted-point tradition during this period, there are obvious continuities with transitional complexes such as San Patrice. The side-notched point style that appeared in the latter becomes one of the marker traits of the Early Archaic. These projectile points are referred to by a number of names throughout eastern North America, including Big Sandy and Greenbrier. Corner-notched types such as Palmer and Jude developed during this period, as did stemmed types such as Kirk. Weinstein, Burden, and Gagliano (1977:4) have established the Early Archaic St. Helena phase in the Florida parishes based on scattered finds of Kirk and Palmer points.

Middle Archaic Period, 5000-3000 B.C.

The Middle Archaic period is characterized by widespread regional differentiation of cultures, and a number of developments in ground stone technology. The latter includes grooved axes, atlatl weights and pendants, as well as more extensive use of grinding stones, which first appeared in the previous period. This period also roughly

corresponds with the Hypsithermal Interval, which brought increased warmth and aridity to areas bordering the Great Plains (Wood and McMillan 1976). The impact of this climatic shift on other portions of the Southeast is not well known at present. It may be that the intensive shellfish collecting evidenced at some riverine sites of this period represents a response to this change (Lewis and Lewis 1961:20). Stoltman (1978:714-715) has also suggested that plant collecting increased in importance during this time.

Two Middle Archaic phases have been identified within southeast Louisiana. The Amite River phase, proposed by Gagliano (1963:114) on the basis of sites found along the terraces overlooking the middle Amite River, is perhaps the earlier of the two. It is characterized by the projectile point types Almagre, Morhiss, Shumla, Wells, and Kent. The other phase, Monte Sano, was based initially on the small mound site of that name (16 EBR 17) at which salvage excavations were conducted by Haag and Ford in 1967. The two low mounds at the site were found to contain platforms which may have served as cremation areas. Artifacts associated with the larger mound included late Archaic dart points, microlithic tools, and a red jasper locust effigy bead. A radiocarbon date of 6220 B.P. $\pm$ 140 was obtained from one of the platforms. Since that time other mound sites in this region, including Hornsby (16 SH 21) and the LSU mounds (16 EBR 6), have yielded similar early dates.

Late Archaic Period, 3000-1500 B.C.

Research elsewhere in eastern North America suggests that the Late Archaic period was a time of marked population increases and the beginning of extensive trade networks. The evidence for the former is seen in the appearance of large habitation sites such as Indian Knoll, Kentucky (Webb 1946), while the latter is reflected in the exotic raw materials that occur at some sites. Plant cultivation involving a tropical domesticate, squash, and possibly native North American species also began during this period (Chomko and Crawford 1978).

The only Late Archaic phase identified for southeast Louisiana thus far is Gagliano's (1963:116) Pearl River phase which is based on a series of oyster shell middens associated with early coastal features. Diagnostic artifacts include Kent, Pontchartrain, Macon, Hale, and Palmillas projectile points and various types of atlatl weights.

Poverty Point Period, 1500-500 B.C.

In much of eastern North America this time interval witnessed a transition from Archaic hunting and gathering cultures to Woodland cultures characterized by food production, pottery manufacture, and mound building (Stoltman 1978:715-717). Current interpretations suggest that these three features have different and possibly unrelated origins. As noted above, tropical domesticates had reached the East prior to 2000 B.C., and there is sufficient evidence of native seed-plant cultivation in the Kentucky and Ohio area by 1000 B.C. (Struever and Vickery 1973). Ceramics probably appeared somewhat earlier than this in the third millenium B.C. along the Atlantic Coast (Stoltman 1978:715), and mound building may have developed independently in several areas by 1000 B.C.

In the Lower Mississippi Valley this transition is marked by the development of the distinctive Poverty Point culture. Among the material characteristics of this culture are baked clay balls or Poverty Point objects, microlith and lapidary industries, and earthworks (Webb 1977). Pottery is not abundant, but fiber-tempered and sand-

tempered wares have been found at several sites. Subsistence data are, in general, few, but they suggest a continuation of an Archaic pattern of intensive collecting of wild plants and animals. However, there is mounting evidence for the cultivation of a tropical domesticate, squash, at Poverty Point sites (Ford 1974; Shea 1978; Jackson 1986).

Two temporally distinct Poverty Point phases have been identified in southeast Louisiana. The earlier Bayou Jasmine phase is based largely on data from the Bayou Jasmine site (16 SJB 2) in St. John the Baptist Parish and the Linsley (16 OR 40) site in Orleans Parish (Gagliano 1963:116). The succeeding Garcia phase was defined on the basis of collections from the Garcia site (16 OR 34), also in Orleans Parish.

Tchula Period, 500 B.C.-A.D. 1

This period in the Lower Mississippi Valley is characterized by the integration of food production, pottery manufacture, and mound building into a single cultural system. In the southern portion of the valley these developments take place in an archeological culture called Tchefuncte. Originally defined in southern Louisiana (Ford and Quimby 1945), Tchefuncte culture is now recognized to extend as far north as the vicinity of Clarksdale, Mississippi, and as far west as northeast Texas. The diagnostic artifacts of this and most of the succeeding prehistoric cultures of the Lower Mississippi Valley are the distinctive ceramics. Tchefuncte pottery is characterized by a laminated paste which appears to lack tempering. Replication studies suggest that the laminated texture is simply the result of minimal preparation of the raw material (Gertjejansen 1982), an expected feature of an incipient ceramic technology. Other diagnostic attributes of Tchefuncte ceramics include the use of podal supports and decorative techniques such as jab-and-drag incising.

The evidence for food production in Tchefuncte culture presently comes from one site, Morton Shell Mound (16 IB 3)—where remains of two tropical cultigens, squash and bottle gourd, and one possible native cultigen, knotweed, were recovered (Byrd and Neuman 1978:11-13). Given the limited nature of these findings, the importance of cultivation in relation to the remainder of the subsistence base is still uncertain. Mound construction, now well documented for the preceding Late Archaic and Poverty Point periods, is surprisingly not clearly associated with Tchefuncte culture. Alan Toth (1977:61-65) has recently reviewed the evidence for Tchefuncte burial mounds and suggested that they are the result of diffusion of certain aspects of Marksville burial practices among a few late Tchefuncte groups. Further research is required to verify this hypothesis.

Two Tchula period phases have been identified in southeast Louisiana. One, the Pontchartrain phase, is based on Ford and Quimby's (1945) early work at sites around Lake Pontchartrain. It includes occupations which probably span the entire period and eventually should be subdivided. Within the present region Pontchartrain phase components have been identified at Diversion Canal (16 AN 16), Clio (16 LV 15), and Bayou Chene Blanc (16 LV 43) (Weinstein and Rivet 1978:Fig. 43). The other Tchula period phase, Beau Mire, is believed to date to the latter portion of the period. Components of this phase have been reported at Kuttruff (16 AN 9), Jim Bayou (16 AN 13), and the Beau Mire site (16 AN 17) within the present region.

Marksville Period, A.D. 1-A.D. 400

In many parts of eastern North America, this period is marked by evidence of extensive interregional contact through a phenomenon labelled the Hopewell

Interaction Sphere (Caldwell and Hall 1964). The focal points of this interaction sphere were societies in the Ohio and Illinois River valleys which acquired large quantities of exotic raw materials, including obsidian, copper, mica, shark's teeth, and marine shells, in exchange for specialized finished goods such as copper panpipes and ear spools (Stoltman 1978:721). Various theories have been offered to explain the nature of this interaction, some emphasizing socioreligious systems and others pointing to economic networks, but the problem remains unresolved. Within the Lower Mississippi Valley, the culture which participated in this interaction sphere is termed "Marksville." Toth (1977:470-477) has argued that Marksville culture developed out of Tchefuncte as a result of intermittent contacts with cultures in the Illinois River Valley area, but he only speculates on the nature of these contacts. He emphasizes that the evidence for Hopewellian interaction is largely limited to the Marksville mortuary system and aspects of ceramic decoration. Other cultural subsystems, such as subsistence and settlement pattern, may have changed very little. Economic data from Marksville sites are extremely limited, but information from contemporary occupations in the Midwest suggests a pattern of intensive collecting of wild plant foods and high density faunal resources, such as fish, supplemented by cultivation of native North American seed plants and a few tropical cultigens (Asch et al. 1979). Present evidence indicates that maize was either not present at this time or of only minor importance.

Two Marksville period phases have been identified in the vicinity of the present region, Smithfield and Gunboat Landing. Smithfield is an early Marksville phase established by Toth (1977) on the basis of excavations at the site of that name (16 WBR 2-3) in West Baton Rouge Parish. Another component is present at the Medora site (16 WBR 1) in West Baton Rouge Parish (Toth 1977:465-466). The Gunboat Landing phase is a late Marksville phase proposed by Weinstein, Burden, and Gagliano (1977) on the basis of Weinstein's (1974) excavations at several sites on the lower Amite River.

Baytown Period, A.D. 400-A.D. 700

The period following the Hopewellian florescence has been characterized as a time of cultural decline throughout much of eastern North America (Griffin 1967:187). This is certainly implied in Phillips' (1970:901) statement that ceramic decoration was "at a remarkably low ebb" during this period in the Lower Mississippi Valley. Recently, however, a number of researchers have suggested that the apparent decline may not have been as pervasive as previously believed. In the Midwest, Braun (1977) and Styles (1981) have argued that this period, in contrast to earlier interpretations, was a time of population growth and increased regional social integration. Along the Florida Gulf coast an elaborate culture called Weeden Island developed during this time (Milanich and Fairbanks 1980:89-143). Even in the Lower Mississippi Valley, new data indicate that the Baytown period was marked by the appearance of two painted pottery complexes (Belmont and Williams 1981). The earlier complex, termed the Quafalorma horizon, developed during the Troyville subperiod and exhibited striking similarities to early Weeden Island ceramics. The later complex, called the Woodville horizon, characterized the Deasonville subperiod and was less elaborate. The remainder of the ceramic assemblage of Baytown culture consisted of a large quantity of Baytown Plain and smaller amounts of decorated types such as Mulberry Creek Cordmarked, Salomon Brushed, and Alligator Incised.

Changes were also occurring in the stone tool tradition during this period. Small arrow points began to replace dart points, reflecting a transition from the atlatl to the bow and arrow. Subsistence data from the Lower Mississippi Valley are limited for this period, but in the Midwest, Styles (1981) has identified a pattern of intensive, localized

collecting of wild plant and animal resources supplemented by increased cultivation of both North American and tropical cultigens. Mound building continued in the Baytown period, and there are indications that a shift from a mortuary function to a building substructure began toward the end of this time (Rolingson 1982).

A single Baytown period phase, Whitehall, has been identified in southeast Louisiana (Phillips 1970:911-912). Components in the vicinity of the present revetment areas include Smithfield and the Kleinpeter site (16 EBR 5) in East Baton Rouge Parish.

Coles Creek Period, A.D. 700-A.D. 1200

Elsewhere in eastern North America this time interval corresponds to the latter portion of the Late Woodland period and the beginning of the Mississippi period. Within the Lower Mississippi Valley, a cultural florescence that shows a marked resemblance to Weeden Island culture of northwest Florida occurs during this period. The precise nature of the relationship of Coles Creek culture to Weeden Island is uncertain, but the similarities in ceramic decoration and community pattern are unmistakable. Both were characterized by the use of incised, stamped, and punctated pottery types in which the decorative zone is largely restricted to a band around the rim of the vessel, and by the construction of small platform mounds around plazas. The latter are generally interpreted as an indication of the development of stratified social systems during this period. These societies were apparently based on economies which included the cultivation of maize. While direct evidence for this is lacking from sites in the Lower Mississippi Valley, the remains of corn have been recovered from Weeden Island sites (Milanich and Fairbanks 1980:127) and from contemporary Late Woodland sites in the Midwest (Styles 1981).

Three Coles Creek period phases are presently recognized within southeast Louisiana. The earliest of these, and the first to be identified, is the Bayou Cutler phase (Kniffen 1936; Phillips 1970:920-923). Weinstein's (1974) research on the lower Amite River identified probable Bayou Cutler phase components at several sites, including Whitehall (16 LV 19), Bayou Chene Blanc (16 LV 43), and Clio (16 LV 15). A late Coles Creek Bayou Ramos phase has been established by Weinstein, Burden, Brooks, and Gagliano (1978:22-23) on the basis of test excavations at the Bayou Ramos I site (16 SMY 133). While Bayou Ramos phase components have not been identified in this region, examination of Weinstein's (1974) ceramic counts suggests that they probably occur at Whitehall (16 LV 19) and other sites with Bayou Cutler phase occupations.

The third Coles Creek period phase, St. Gabriel, dates to the very end of the period and is based on Woodiel's (1980) excavations at the site of that name in Iberville Parish. Weinstein (1987:90) has identified additional St. Gabriel phase components in the premound levels at Medora and at the Bayou Goula site in Iberville Parish.

Mississippi Period, A.D. 1200-A.D. 1700

The last prehistoric period in eastern North America witnessed the development of chiefdom-level societies based on intensive cultivation of maize, beans, and squash. Perhaps the most dynamic of these societies appeared in the Middle Mississippi Valley between A.D. 900 and A.D. 1050. Referred to as the Mississippian culture, it was characterized by a shell-tempered ceramic industry and a settlement pattern including large mound centers and nucleated habitation sites which were often fortified (Stoltman 1978:725). During the first centuries of the second millenium A.D., this culture spread rapidly along the major river valleys of this portion of the continent. The nature of this expansion, either by movement of people or diffusion of ideas, is

still debated. However, by A.D. 1200 Mississippian culture was found as far south as northern Mississippi and as far east as Georgia.

In the Lower Mississippi Valley, Mississippian culture encountered an indigenous non-Mississippian culture, and a hybridization of the two occurred. Phillips (1970) considered the resident culture to have been Plaquemine, an outgrowth of Coles Creek culture that began about A.D. 1000. He viewed the interaction between Mississippian and Plaquemine culture as resulting in gradual changes in the Plaquemine ceramic tradition and settlement pattern. Later in the period, after A.D. 1400, an actual intrusion of Mississippian groups displaced the resident Plaquemine groups. Recently, Brain (1978) has offered a somewhat different interpretation of this sequence of events. He argues that the Lower Mississippi Valley culture which experienced the initial Mississippian contact about A.D. 1200 was Coles Creek, and that the resulting hybridization produced Plaquemine culture. The remainder of the period saw a gradual increase in Mississippian influence, at least in the Yazoo Basin, until about A.D. 1400, when a full Mississippian cultural pattern was achieved in the Lake George phase (Brain 1978:362). Brain's reinterpretation of the cultural sequence has resulted in a shift in the established chronologies. Phases such as Crippen Point and Preston, which were formerly considered Plaquemine culture manifestations of the early Mississippi period, are now placed late in the Coles Creek period and assigned to a transitional Coles Creek culture. The latter now persists until A.D. 1200 and includes a number of changes in ceramic technology which had previously been considered indicators of Plaquemine culture. The data supporting Brain's interpretation are unpublished, so it is difficult to assess the validity of his argument. If he is correct, Plaquemine culture throughout the Lower Mississippi Valley should postdate A.D. 1200 and presumably appear at progressively later times at an increasing distance from the Yazoo Basin. A thorough reassessment of Plaquemine, similar to that undertaken by Hally (1972) 16 years ago, is in order.

While disagreeing somewhat on the origin of Plaquemine culture, all authorities concur that it exhibited numerous continuities with the preceding Coles Creek culture. Several of the Plaquemine ceramic types appear to be direct outgrowths of Coles Creek types. There are some changes, however, including the addition of small amounts of finely ground shell and other organic matter to the pottery, and the extension of the decorative field to include the body of the vessel. Mound construction continued on an even greater scale than in the previous period. The mounds are now larger, there are more at each site, and there are more sites. Intensive agriculture is presumed to be the economic base on which this florescence was built, but there is little direct evidence of it in the Lower Mississippi Valley.

Two Mississippi period phases, Medora and Delta Natchezan, have been identified in the vicinity of the present revetment areas. Medora is an early Plaquemines phase based on Quimby's (1951) excavations at the type site. Another component is present at the Kleinpeter site. Delta Natchezan is a late Plaquemine phase which is based on Quimby's (1957) excavations at the Bayou Goula site.

Colonial Period, A.D. 1700–1803

European exploration of this area began in 1542 when the survivors of the De Soto expedition passed down the Mississippi River on their way to the Gulf, but extensive European contact did not occur until the late-seventeenth and early-eighteenth centuries. In 1682 an exploring party led by Rene Robert Cavelier, Sieur de la Salle, travelled from French Canada down the Mississippi River to its mouth and there laid claim to the entire river valley for France. The party then returned upriver to

Canada. Two years later La Salle attempted to relocate the mouth of the Mississippi from the Gulf of Mexico in order to establish a colony on it. However, he missed the river and landed in Texas instead. The small colony which he founded on Matagorda Bay soon failed, and several years passed before the French crown was willing to finance another attempt. Finally in 1698 Pierre Le Moyne, Sieur d'Iberville, and his younger brother, Jean-Baptiste Le Moyne, Sieur de Bienville, were selected to head another colonizing expedition to the Gulf of Mexico. The following year they arrived in North America and selected a site near Biloxi for their base. In that same year, Iberville led an exploring party up the Mississippi River to the vicinity of the mouth of Red River and then returned to Biloxi by way of Bayou Manchac and Lakes Maurepas and Pontchartrain.

The principal aboriginal groups encountered by the early European expeditions through the region were the Houma and the Bayougoula. When initially contacted by Iberville in 1699 the Houma occupied a village in southern Wilkinson County, Mississippi, or the adjacent portion of West Feliciana Parish, Louisiana (Swanton 1911:285; Guevin 1983:49-64). After an attack by the Tunica in 1706 they moved south, first to the vicinity of New Orleans and then by 1709 to Ascension Parish. There they established at least two, and possibly three, villages. One was known as the "Grand" or "Great" Houma's village, located near Burnside, Louisiana (Giardino 1984:249). Bryan Guevin (1983) has recently presented archeological and documentary evidence that identifies this village with site 16 AN 35. A second village, referred to as the "Petit" or "Little" Houmas village, was possibly located near Geismar, Louisiana. This village may be associated with site 16 AN 3, although there is presently no archeological data to support this hypothesis. The Houma continued to live in the Ascension Parish area until the late-eighteenth century, when they sold their lands and began moving to Terrebonne Parish (Swanton 1911:290-291).

In 1699 the Bayougoula occupied a village on the west bank of the Mississippi River above Bayou Lafourche (Swanton 1911:274). Seven years later the Taensa, who had come to live with them, attacked the Bayougoula, killing many of them. The remnant moved for a time to the vicinity of Fort de la Boulaye in Plaquemines Parish, but by 1720 they were living on the west bank of the Mississippi River near Vacherie, Louisiana (Giardino 1984:248). By the 1730s they appear to have merged with the Houma.

The first European settlement in the vicinity of the present project areas was apparently established by French Canadian trappers at Pointe Coupee in the first or second decade of the eighteenth century (Curet 1969:1). In 1717 Bienville established a post there, and shortly thereafter land grants were offered in this area. One of the largest of these grants was the St. Reyne concession located opposite Pointe Coupee in West Feliciana Parish (Figure 3). Other land grants in this area included the de Mezieres concession located downstream from the St. Reyne concession, the Dartaguette concession at Baton Rouge, and the Paris concession at the former Bayougoula village. Most of these concessions were owned by members of the board of directors of the Company of the West, which ran the colony for the French crown. The owners generally resided elsewhere, and the concessions were operated as agricultural plantations by small numbers of engagees and slaves. They grew a combination of food crops, such as corn and rice, for their own consumption and for sale in New Orleans, and cash crops such as tobacco and indigo. Many of the concessions failed with the collapse of the Company of the West, but their occupants often remained in the area to work on other plantations or on smaller farms. The Pointe Coupee area in particular became a center for settlement and agricultural production during the latter portion of the French period.

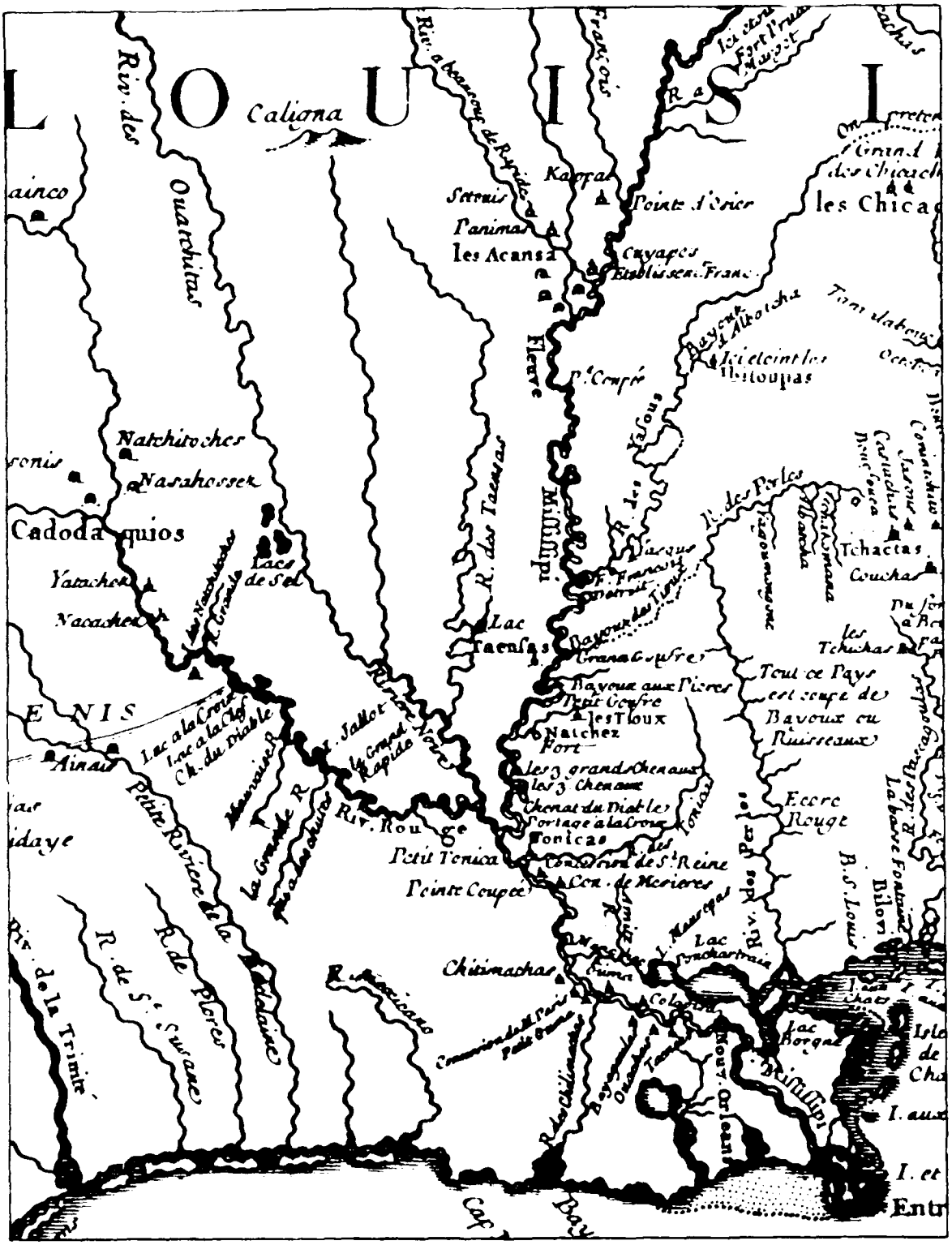


Figure 3. A portion of a map of French Louisiana ca. 1744 (Bellin 1744).

In 1763, as a result of the Seven Years War, France ceded all of her holdings east of the Mississippi River and north of the Isle of Orleans to Great Britain and all of the remainder of Louisiana to Spain. Both the British and Spanish built forts on the Mississippi at its junction with Bayou Manchac, the boundary of their territories, and began offering land grants to settlers. British grants were generally given to former military officers and soldiers, but the Spanish followed a more open policy, offering land to a variety of ethnic groups including French, Germans, Acadians, and Canary Islanders. Both governments required that grant recipients develop their property within a certain period of time or forfeit it to the crown. These policies attracted increasing numbers of immigrants to the area, and tobacco and indigo plantations began to spread along the Mississippi. Figure 4 depicts settlement in the British portion of the region in 1778.

Spain allied itself with France and the American Colonies in the American Revolution and used the opportunity to expand its holdings in the Mississippi Valley. In 1779 forces under Spanish governor Don Bernardo de Galvez seized British posts at Manchac and Baton Rouge, effectively ending British control of West Florida. The plantation economy of the region continued to grow under Spanish rule, but by the 1790s persistent problems with the indigo crop and technological advances in the granulation of sugar and the ginning of cotton led to a shift toward sugar and cotton as the principal commercial crops. Sugar predominated along the river south of Baton Rouge, but north of there, cotton was the most common crop. Baton Rouge became the commercial and political center of the region during this time and had a population of over 1,500 by 1803 (Meyers 1976:62).

American Period, A.D. 1810-Present

Spain returned Louisiana to France in 1800 by the secret treaty of San Ildefonso, but retained West Florida. France then sold the vast territory to the United States in 1803. Under the territorial government, the area of present-day Ascension Parish was part of Acadia County. Ascension Parish was created in 1807 and Louisiana was admitted to the Union in 1812. West Florida remained under Spanish rule until 1810 when the population rebelled and formed an independent republic before being annexed by the United States. American immigration into the region, which had been occurring for several decades, increased rapidly after annexation. Many of the new arrivals started small plantations, only to discover after a few years that they lacked the capital to maintain them. Gradually, large plantation owners began to buy up the surrounding small landholdings. Sugarcane and cotton were the most important commercial crops in the region during this period. This pattern continued until the Civil War, when the plantation economy was severely disrupted. After the war agricultural production resumed, but on a smaller scale; other products such as rice and livestock became important. Agriculture remained the basis of the regional economy until the 1950s, but since that time industrial development along the Mississippi River has become increasingly important.

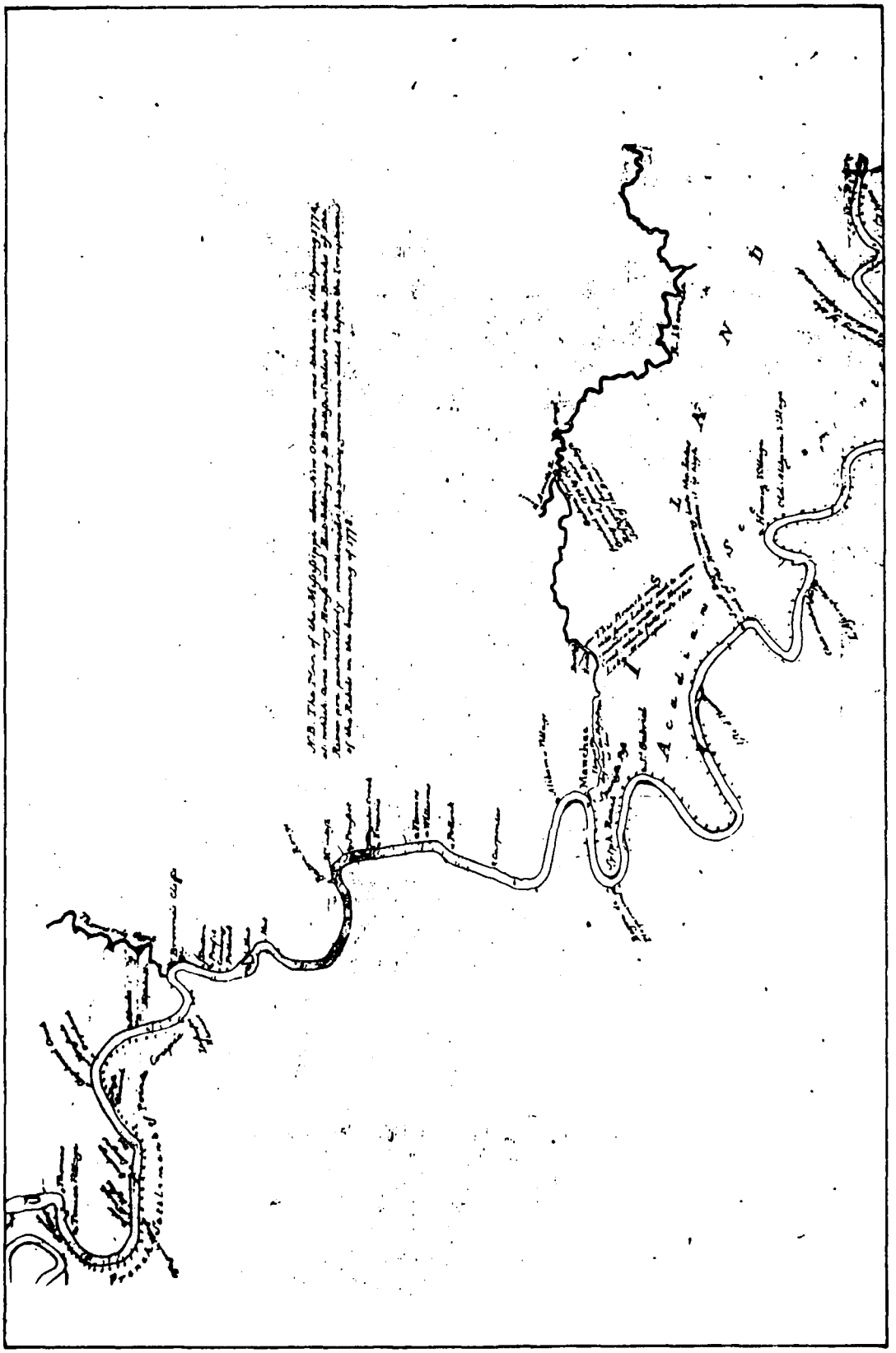


Figure 4 A portion of a map of the Lower Mississippi River ca. 1778 (Gauld 1778).

CHAPTER 4: RESEARCH DESIGN AND METHODOLOGY

The goals of the present research were (1) to locate cultural resources occurring within the project areas; (2) to assess their significance in terms of criteria for nomination to the National Register of Historic Places; (3) to make recommendations for their treatment; and (4) to contribute to our present understanding of the archeology of the region.

The results of previous archeological research along the batture of the Mississippi River suggest that this setting may provide substantial information on past occupations along the river, but that the sites are often deeply buried by recent alluviation (Castille 1980b; Pearson and Guevin 1984; Goodwin et al. 1985). Therefore, this study utilized an approach which combined archival research on the former locations of historic structures, or other features, with deep subsurface testing intended to identify either historic or prehistoric archeological remains.

The research was conducted in three phases. The first consisted of a review of the pertinent literature and other records on the geology, history, and archeology of the region encompassing the four revetment areas. This research was intended to provide both background information on the prehistory and history of these areas and specific data on the location of known or potential sites. Information was sought on the sequence of land ownership and use within the four revetment areas, as well as the history of the region as a whole. Documentary sources employed included conveyance and tax records on file at the Ascension Parish and East Baton Rouge Parish courthouses, census data available in the Middleton Library at Louisiana State University and the Baton Rouge Public Library, and collections of personal papers housed at Hill Memorial Library at Louisiana State University. Large-scale historic maps of the revetment areas were obtained from the Louisiana Department of Transportation and Development, the Mississippi River Commission, the New Orleans District of the Corps of Engineers, and the National Archives. These were then reproduced at a common scale and overlaid on a current base map in order to identify the former locations of structures.

The second phase of the study involved intensive surveys of the four revetment areas. Field procedures at all of the areas were roughly similar. To maintain spatial control over the fieldwork, the first step was to establish a grid at each area. A baseline was laid out along the riverbank and lines perpendicular to it extended to the levee or the limit of the right-of-way. Once the grid was established, an intensive survey was made along the riverbank. The remainder of the revetment area was then examined through a series of pedestrian transects spaced no more than 20 m apart with shovel or auger tests at intervals of no more than 50 m along each transect. Auger tests were employed in areas where the depth of recent overburden was believed to be greater than 50 cm. Additional subsurface tests were conducted in areas which the historic map research suggested to have been the former location of structures or other features.

When cultural resources were located during the survey, they were briefly tested through a combination of surface examination, controlled collecting, and systematic shovel or auger testing. The testing was intended to determine site boundaries, the nature of the deposit, its integrity, stratigraphy, and cultural affiliation.

The final phase of the study consisted of analyses of the data collected and preparation of a report of findings. The artifacts, samples, and various records generated during the fieldwork were catalogued following the methods presently

employed by the Louisiana Division of Archaeology and were then analyzed according to currently acceptable archeological procedures. The results of these analyses, along with the information obtained from the documentary research, were used to assess the significance of the cultural resources located in terms of the criteria for nomination to the National Register of Historic Places.

CHAPTER 5: RESULTS

This chapter presents a discussion of the results of the research by project area. In each case the narrative begins with the location of the area and a description of its current conditions. Next, a summary of information on the history of land ownership and use within the project area is presented, followed by a discussion of the results of the fieldwork.

Arrow Bend Revetment Area

Location and Description

The Arrow Bend Revetment Area consists of two segments located on the left descending bank of the Mississippi River approximately 11.5 km above Bayou Sara, in West Feliciana Parish, Louisiana (Figure 5). One segment is located between River Miles 272.6 and 273.7 (Ranges U-30 to U-50) and includes a work area 5100 ft (1554.5 m) long. The other segment is located downriver from the first between Miles 269.9 and 270.3 (Ranges D-80 to D-60) and includes a work area 2000 ft (609.6 m) long. In both segments the landside limit of the project area is located 500 ft (152.4 m) back from the riverbank.

The project area is located in a portion of the Mississippi River floodplain known as the Tunica Swamp. This is a large triangular-shaped area of backswamp and point bar deposits lying between the Mississippi River and the Tunica Hills. There is presently no artificial levee along this portion of the river so that the entire area receives annual overflows. It supports one of the largest tracts of bottomland hardwood forest remaining along the active channel of the river.

The upstream segment of the Arrow Bend project area is composed of point bar and natural levee deposits of varying ages. Fisk (1944:Plate 22) identified the point bar deposits underlying the eastern half of this segment of the area as being associated with a Stage 14 channel. While his estimate of the age of the deposits (ca. A.D. 1400) may not be correct, it is probably safe to assume that they date to some portion of the late prehistoric period. These deposits are overlain by natural levee deposits which are associated with later channels and are still aggrading. They form an elevated ridge which slopes rapidly away from the riverbank. The western half of this segment of the project area is composed of point bar deposits that have prograded within the last 50 years. They exhibit the characteristic ridge and swale topography of such deposits and do not attain the elevation of the natural levee in the eastern half of the segment.

The vegetation cover within the upstream segment of the project area consists of a bottomland hardwood forest on the natural levee ridge and communities dominated by willows and cottonwoods on the more recent point bar deposits. A gravel road passes through the eastern half of this segment, and at the eastern end of the area is a modern hunting camp.

The downstream segment of the project area is composed of point bar deposits which have formed during the late-nineteenth and twentieth centuries (Fisk 1944:Plate 22). Along the riverbank in the eastern half of this segment they support a batture forest of willows and cottonwoods. However, the remainder of this segment has been cleared for agriculture. Fields make up much of this area, but in the extreme western end of this segment is a complex of modern farm buildings.

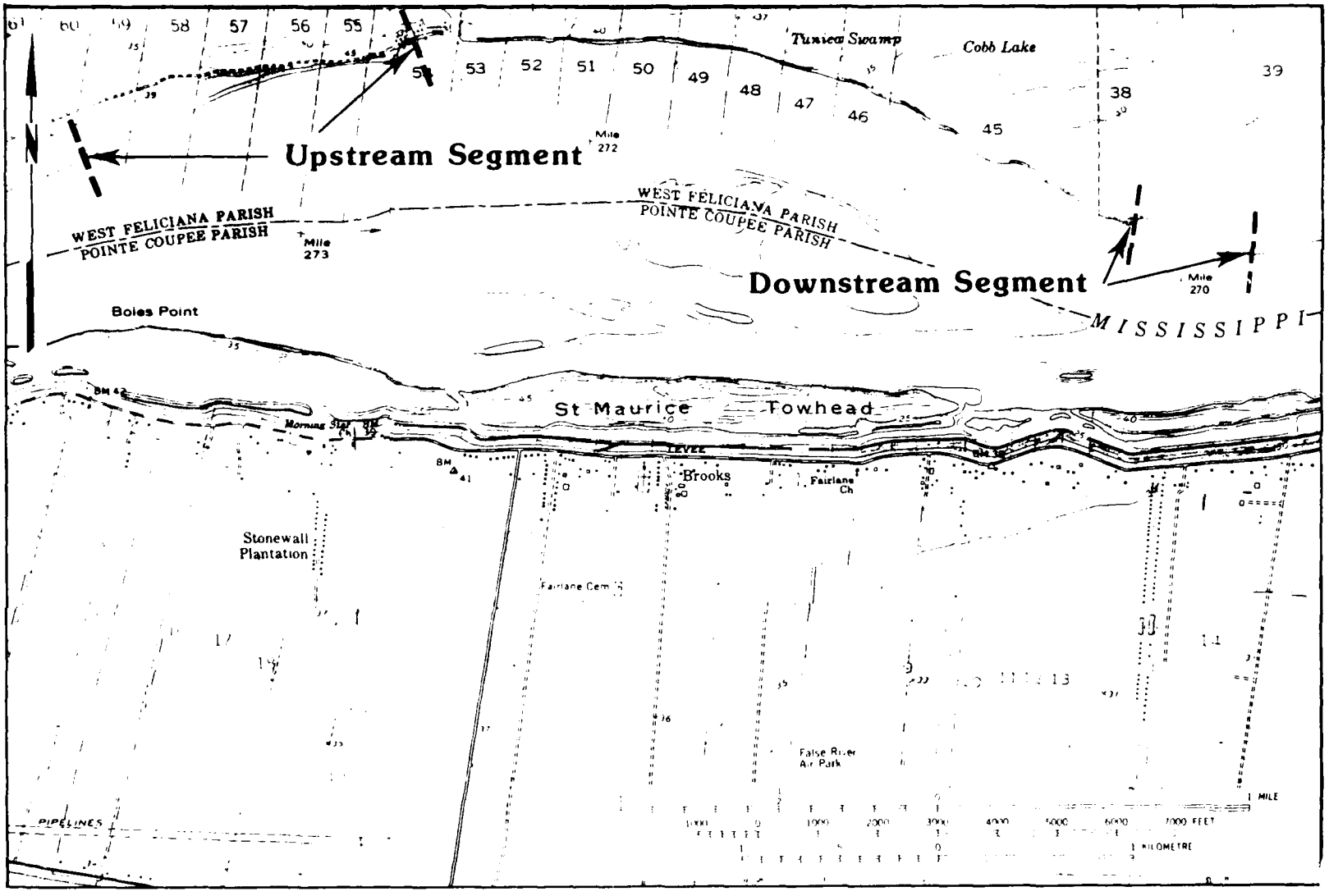


Figure 5. Location of the Arrow Bend Revetment area (base maps are U.S.G.S. Morganza 7 1/2' Quadrangle, 1968 and U.S.G.S. New Roads 7 1/2' Quadrangle, 1982).

History of Land Ownership and Use

The earliest records of land ownership within the Arrow Bend project area date from the period of British control of the area. The Wilton map of 1774, which shows British land grants along the Mississippi River, indicates the following grants in this area:

Captain Graham	2000	acres
D. Cock	500	acres
John Blommart	1000	acres
Peter Vanderwide	500	acres
W. Williams	1000	acres

It is not clear, however, how many of these individuals actually settled on their property and made the necessary developments to comply with the conditions of the grants. None of their names appear on the Gauld map of 1778, which shows settlements along the river (see Figure 4). Instead one finds the names Butler, McIntosh, Hesket, Gradings, and Comyns. Apparently the original grantees either sold their property or forfeited it to the government. Unfortunately, there is little information on the nature of these early settlements or the activities in which their occupants were involved.

By the early American period the number of settlements in this area increased. Scotts' 1839 "Homographic Chart of the Settlements on the Mississippi River" shows the names of a number of landholders along this portion of the river. In the vicinity of the revetment area are found McKelsie and Murphey, Restara Hardwick, Richard Bradley, Seth Pearl, and Henry Cobb. Although levees are not shown on maps of this period, the number of settlements in this area suggests that by this date there were levees along the Mississippi in this area.

During the middle-nineteenth century, land within the upstream segment of the revetment area was owned by McHatton and J.P. Bryant. Persac's 1858 map of plantations along the Mississippi River indicates that the lands in this area were producing cotton during that period, but it is not known how large an area was in cultivation or where structures were located on the property. The downstream segment of the revetment area was still occupied by the river at that time.

By the late-nineteenth century, settlement in the vicinity of the revetment area had diminished considerably. The Suter map of 1874 and the 1879-80 Mississippi River Commission map both indicate that much of this area had returned to forest by that time (Figure 6). Small fields were present upstream from the upper segment of the revetment area and near the downstream segment, but the only cultural feature shown within the project area was a levee that crossed the western edge of the downstream segment. The levees were not continuous at that time, and the maps suggest that no attempt was being made to maintain them. It is probable that during the Civil War the levees had been allowed to deteriorate and after the war the decision was made to abandon the effort entirely. During this century the area became entirely reforested except for occasional camps located along the river. The camps located at the eastern end of the upstream segment were all constructed since 1962. Sometime after 1965, a commercial farming operation cleared several large tracts near the downstream segment of the revetment area and began cultivating soybeans after the floodwaters receded each year. The farm buildings in that area date to that period.

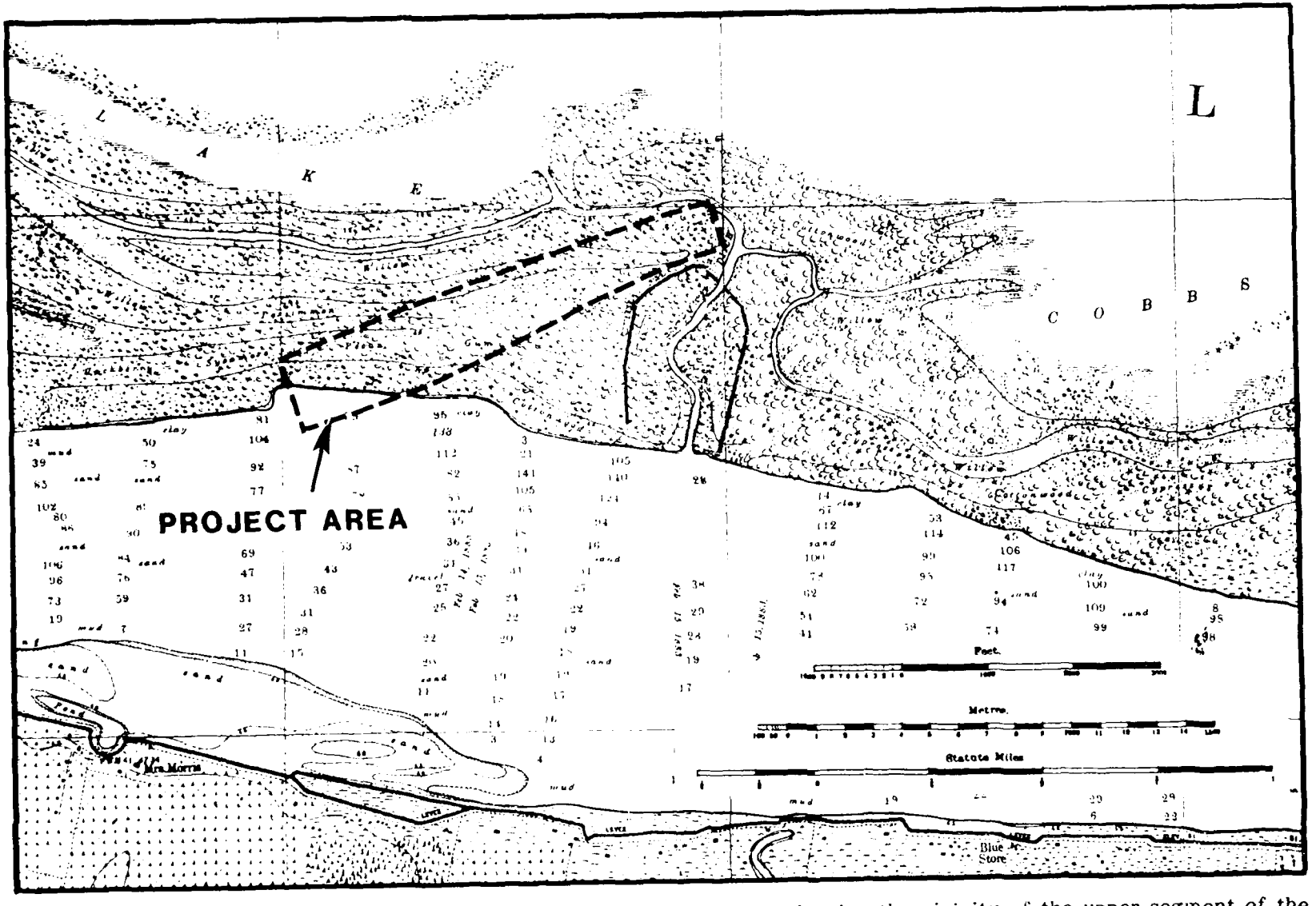


Figure 6. A portion of the 1879/80 Mississippi River Commission map showing the vicinity of the upper segment of the Arrow Bend Revetment area.

Results of the Fieldwork

An intensive survey was conducted within the upstream segment of the revetment area, but, in accordance with the scope of work, the downstream segment was examined only briefly because of the recent age of the deposits there. The only cultural features encountered within the upstream segment were the hunting camps located at its eastern end. Figure 7 depicts the number of structures in the area in 1981. Since that time additional buildings have been erected. The present survey recorded 24 structures, including elevated camp houses, elevated trailers, and sheds of various types. Figure 8 illustrates a typical elevated camp house in the area. As noted previously, all of these structures are less than 30 years old. Older cultural material, if it is present in this area, must now be deeply buried beneath more recent alluvium.

The only cultural features noted within the downstream segment of the revetment area were the farm buildings located at its western end. Figure 9 illustrates the number of structures located there in 1981. Since that time the two easternmost structures have been removed. The remaining buildings include a small ranch style farmhouse and two galvanized steel grain silos, all of which are less than 25 years old. The silos are now being modified for use as a hunting club.

Manchac Revetment Area

Location and Description

The Manchac Revetment area was located on the left descending bank of the Mississippi River between River Miles 216.2 and 217.2 (Ranges U-45 to U-100), approximately 22.5 km below Baton Rouge, in East Baton Rouge Parish, Louisiana (Figure 10). The area to be examined was 4600 ft (1402.0 m) long and extended to the riverside toe of the modern levee, a distance which averaged about 600 ft (182.9 m).

The nature of the subsurface deposits within the project area is somewhat unclear. Fisk (1944:Plate 22) indicated that Stage 6 and Stage 7 channels of the Mississippi River passed through this area, leaving point bar, natural levee, and possibly relict channel deposits in their wake. However, Saucier (1969), on the basis of more recent boring data, mapped the area as consisting of backswamp deposits overlain by approximately 4.5 m of natural levee The uppermost sediments within the area are recent overbank deposits which in places are 90 cm thick.

The riverbank within this area exhibits a 0.5 to 1.5 m vertical face, beneath which it slopes gradually down to the low water line. Vegetation cover varies from willows and cottonwoods along the lower riverbank to mature bottomland hardwood forest on portions of the top bank. Borrow pits for the modern levee extend the length of the project area, and a discharge pipe for the Gardere Lane sewage disposal plant is located at the downstream end of the area.

History of Land Ownership and Use

Information on early colonial period ownership of property within the project area is limited. The Wilton map of 1774 indicates that this area may have been part of a British land grant of 5000 ac to John McIntosh. However, the Gauld map of 1778 shows no European settlements in this area. Instead, an Alabama Indian village is depicted in this vicinity (see Figure 4). The Alabama were an Upper Creek tribe who began leaving their homeland in present-day Alabama after the Treaty of Paris in

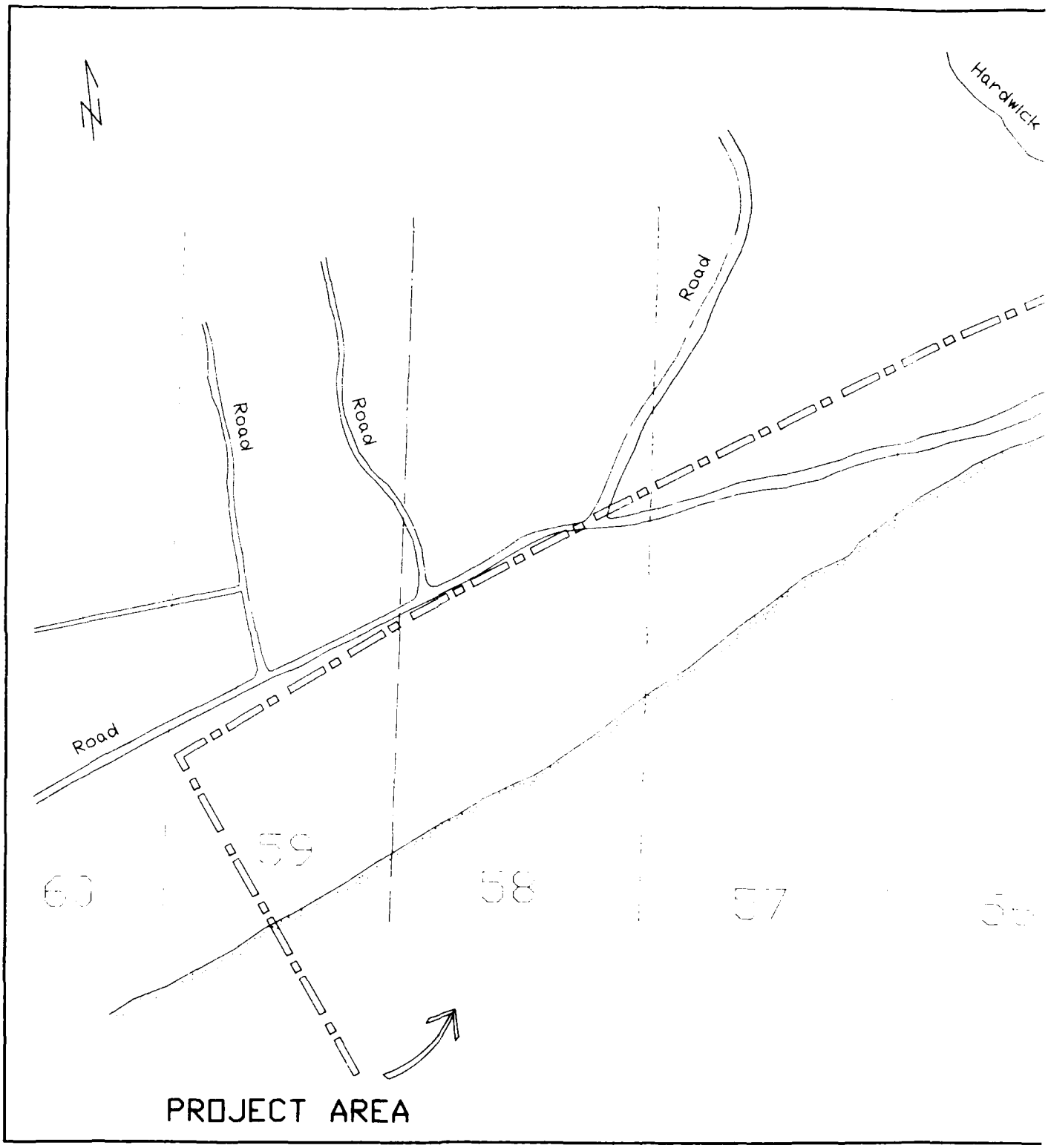
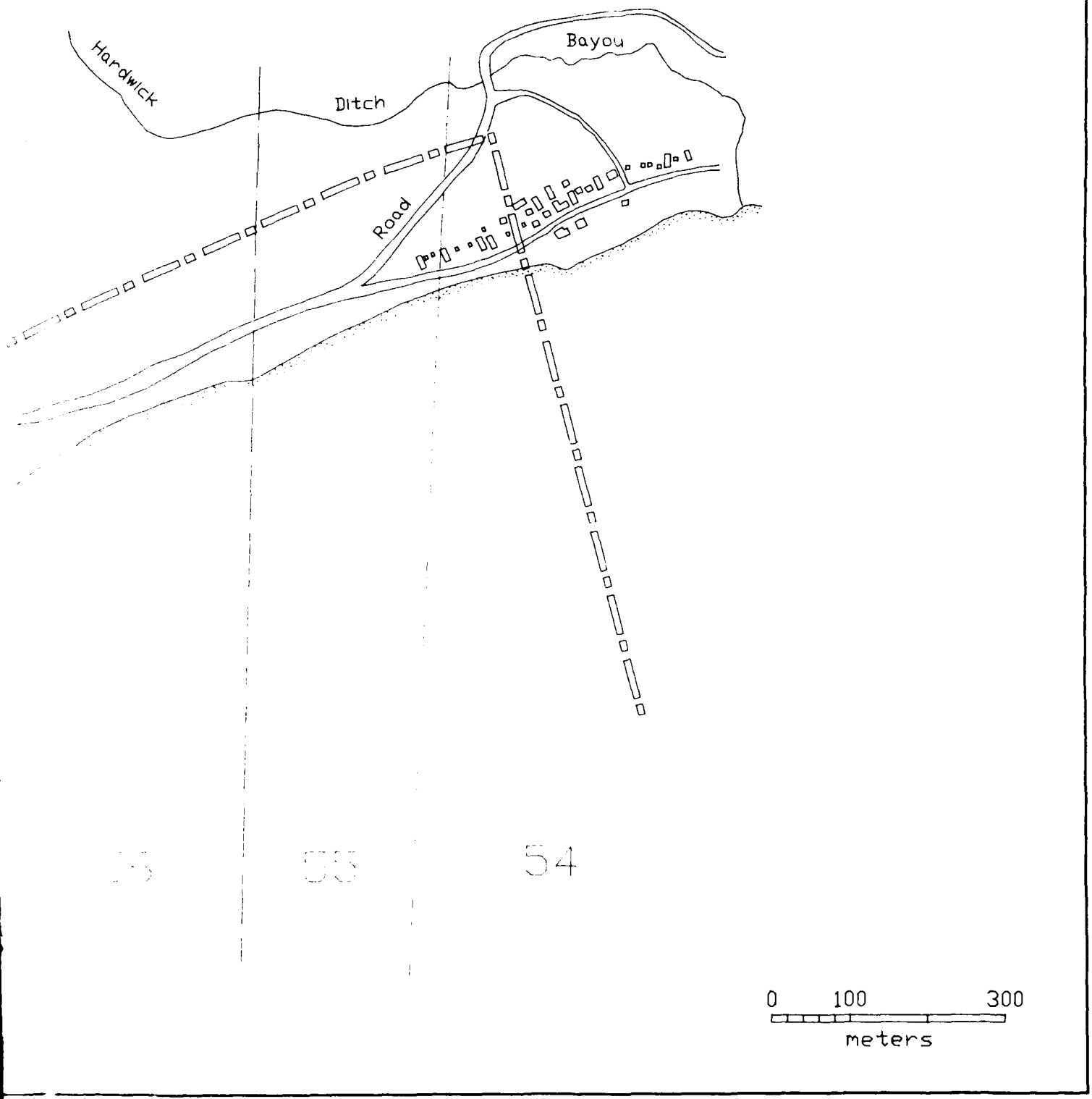


Figure 7. Plan of the upstream segment of the Arrow Bend Revetment area in 1981.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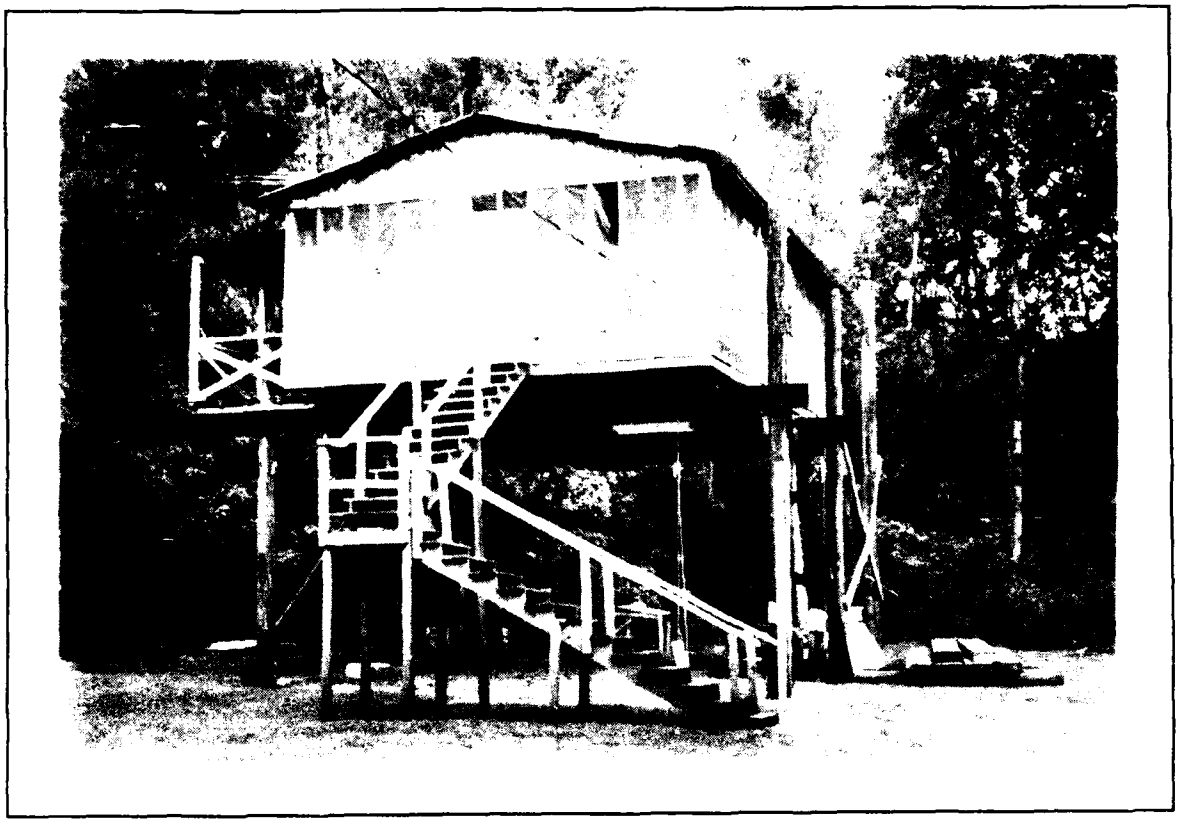


Figure 8. A typical camp house located at the eastern end of the upstream segment of the Arrow Bend Revetment area.

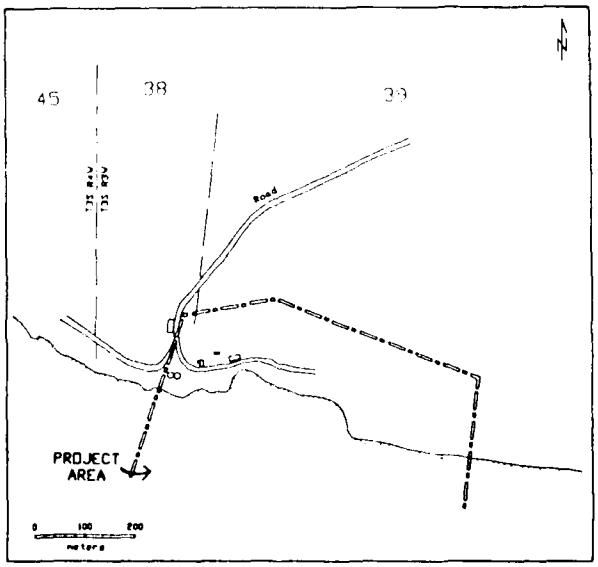


Figure 9. Plan of the downstream segment of the Arrow Bend Revetment area in 1981.

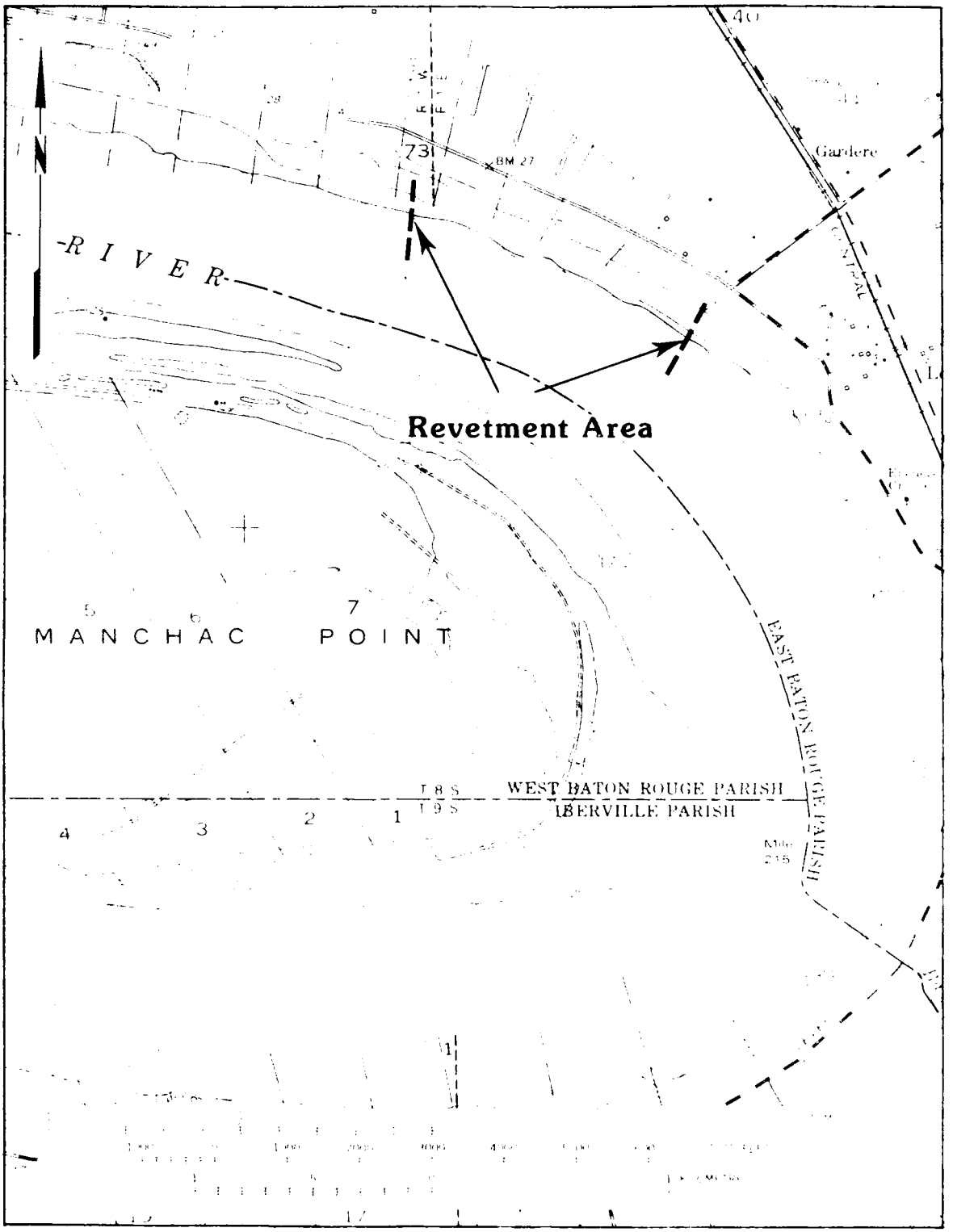


Figure 10. Location of the Manchac Revetment area (base map is U.S.G.S. Plaquemine 7 1/2' Quadrangle, 1980).

1763. Some groups moved west and settled for a time on the Lower Mississippi River. One village was located near Union in St. James Parish and a second was located north of Bayou Manchac in East Baton Rouge Parish. William Bartram visited the latter village in August of 1777 and described it as follows:

> Two miles above Manchac we put into shore at Alabama: this Indian village is delightfully situated on several swelling green hills, gradually ascending from the verge of the river (Bartram 1791:342).

The village was still located there in 1784 when Thomas Hutchins (1968:44) described it as "consisting of twenty-five warriors"; however, it may have been abandoned not long after that, because by the 1790s the Spanish were granting land in this area to European settlers.

Between 1790 and 1799 land within the project area was granted to Jean Baptiste Daigre (or Daigle), Gregory Babin, Francis Daigre (or Daigle), Daniel Provanchez, and Simon Daigle (Lowerie and Franklin 1834:41, 47, 56). The grants were all of 3 to 4 arpents front on the river by 40 arpents deep. All of these individuals were apparently Acadian exiles who had arrived in Louisiana after the 1760s. Two of the properties, those of Gregory Babin and Simon Daigle, were occupied as early as 1785, but the remainder were not settled until the 1790s. The grantees or their successors established small farms on their properties and probably raised corn, livestock, and a small amount of cotton. These farms persisted through the 1820s and in some portions of the project area remained separate land holdings until some time in this century.

During the 1830s the various tracts comprising the project area began to be consolidated into larger land holdings. Fergus Duplantier, the son of Armand Duplantier, owner of Magnolia Mound Plantation, had acquired Section 41 at the downstream end of the area in 1830 (East Baton Rouge Parish Judges Book 1:281) and by 1840 he had added all of the adjoining Section 40 (East Baton Rouge Parish J. B. 2:259 and J.B. Q:350), giving him a total frontage of 13 1/2 arpents. The 1840 U.S. Census indicates that he owned 70 slaves at that time, 45 of whom were involved in agriculture (U.S. Bureau of the Census 1840). Although cotton was the predominant crop in the region at that time, it is probable that Duplantier was growing sugar cane also.

The land immediately upriver from Duplantier in Section 77 was acquired by Laurent Daigre in a series of transactions in 1818 and 1820 (East Baton Rouge Parish J. B. G:100; East Baton Rouge Parish J. B. H:397). In 1840 he added the adjacent property in Section 78 (East Baton Rouge Parish J. B. Q:363), giving him a total frontage of 6 1/4 arpents. The U.S. Census taken in that year indicates that he had 23 slaves, 15 of whom were involved in agriculture (U.S. Bureau of the Census 1840).

Both Laurent Daigre and Fergus Duplantier died in the early 1840s. In 1846 Daigre's widow, Celestin Trahan, sold the plantation to Francois Gardere (East Baton Rouge Parish J. B. S:125). Six months later Gardere in turn sold it to the widow of Fergus Duplantier, Josephine Joyce Duplantier, and her nephew, Fergus Peniston (East Baton Rouge Parish Notarial Book H:75). This expanded the Duplantier's plantation to include all of the present project area, except a small portion of Section 78 and all of Section 79 of T8S, R 1E and Section 73 of T8S, R1W. Sugar records from this period indicate that Mrs. Duplantier was growing significant quantities of sugar cane by this time, suggesting that cotton was not an important crop on the plantation (Table 1).

Table 1. Sugar Production on Chatsworth Plantation 1844-1899 (Champomier 1844-1862; Bouchereau 1875-1899).

Year	Owner/Manager	Plantation Name	Sugar (Hhds)
1844	Mrs. F. Duplantier	--	455
1845-46	Mrs. F. Duplantier	--	395
1846-47			
1847-48			
1849-50	Mrs. F. Duplantier	--	312
1851-52	Mrs. F. Duplantier	--	475
1852-53	Mrs. F. Duplantier	--	709
1853-54	Mrs. F. Duplantier	--	710
1854-55	Fergus Peniston	--	800
1855-56	Fergus Peniston	--	360
1856-57	Fergus Peniston	--	140
1857-58	Fergus Peniston	Chatsworth	512
1858-59	Fergus Peniston	Chatsworth	903
1859-60	Fergus Peniston	Chatsworth	425
1860-61	Fergus Peniston	Chatsworth	405
1861-62	Fergus Peniston	Chatsworth	730
1868-69	Fergus Gardere	Chatsworth	203
1875-76	Fergus Gardere	Chatsworth	325
1876-77	Fergus Gardere	Chatsworth	340
1877-78	Fergus Gardere	Chatsworth	280
1878-79	Fergus Gardere	Chatsworth	354
1879-80	Fergus Gardere	Chatsworth	440
1880-81	Fergus Gardere	Chatsworth	454
1881-82	Fergus Gardere	Chatsworth	Next Year
1882-83	Fergus Gardere	Chatsworth	500
1883-84	Fergus Gardere	Chatsworth	430
1884-85	Fergus Gardere	Chatsworth	340
1885-86	Fergus Gardere	Chatsworth	417
1886-87	Fergus Gardere	Chatsworth	246
1887-88	Fergus Gardere	Chatsworth	466
1888-89	Fergus Gardere	Chatsworth	293
1890-91	Fergus Gardere	Chatsworth	640,000 lbs
1891-92	Fergus Gardere	Chatsworth	608,000 lbs
1892-93	Fergus Gardere	Chatsworth	705,647 lbs
1893-94	Fergus Gardere	Chatsworth	473,644 lbs
1894-95	Gardere & Womack	Chatsworth	1,042,119 lbs
1895-96	T.A. Womack	Chatsworth	690,000 lbs
1896-97	T.A. Womack	Chatsworth	900,000 lbs
1897-98	T.A. Womack	Chatsworth	800,000 lbs
1898-99	Chatsworth Sugar Co.	Chatsworth	500,000 lbs

By 1850 Mrs. Duplantier was one of the wealthiest people in East Baton Rouge Parish. The Census of that year listed the value of her real estate as $175,000 (U.S. Census Bureau 1850). Unfortunately, she does not appear in the Agricultural Census of that year; however, the sugar records from that period indicate that a steam-powered sugar mill had been constructed on the plantation.

In 1853, Mrs. Duplantier sold her interest in the plantation to her nephew, Fergus Peniston (East Baton Rouge Parish Conveyance Office Book H:303). Peniston gave the name Chatsworth to the plantation, and it was to remain with the property well into the twentieth century. It appears on the Persac map of 1858, which shows the property extending from the river to Bayou Fountain at the base of the highlands. The main road from the river led along the south side of the plantation, in the present location of Gardere Lane. A warehouse for goods being shipped to or from plantations in the area was located just north of the road near the river, and the local post office was situated there as well (Persac 1858). The Agricultural Census taken at the end of that decade gives an indication of the size of the plantation and its products (Table 2). In 1858 Peniston began construction on a grand new manor house for the plantation. However, it was not completed by the time the Civil War began and it remained unfinished. Lyle Saxon provides the following description of it in the late 1920s.

> There are large Corinthian columns across the central portion, and the two wings are ornamented with fluted pilasters. Wide steps lead up to the veranda. Inside, the house is ornate. The woodwork is very fine and typical of the Greek revival. There are silver knobs and locks on the doors. The house contains fifty rooms, some forty feet square (Saxon 1950:304).

After the war Peniston, like many plantation owners, was forced to sell his property. Chatsworth Plantation was purchased on December 26, 1865, by Fergus Gardere (East Baton Rouge Parish C.O.B. U:189). It appears not long after that on a series of maps produced by the Louisiana Department of Public Works to show levees along the Mississippi River (Louisiana Department of Public Works 1869). Information from those maps has been overlain on a current map of the project area in Figure 11. The Chatsworth main house is shown in Section 41 in an area now occupied by the borrow pit for the modern levee. One of those may be the warehouse depicted on the Persac map. Farther upstream in Section 77 are two additional structures associated with the plantation.

Gardere continued to operate Chatsworth as a sugar plantation, at a time when many other planters were switching to rice or cotton, even though his production was less than half of pre-war levels for many years (see Table 1). In 1871 he entered into a partnership to run the plantation with Eliza, Edward, and Riviere Gardere. The 1880 Census indicates that Fergus Gardere was at that time a 62-year-old widower, residing with two nephews and a granddaughter (U.S. Bureau of the Census 1880b). The Agricultural Census taken in that year provides an indication of his worth and the products of his plantation (Table 3).

Chatsworth Plantation appears on the 1882/83 Mississippi River Commission map of this area, and information from this map along with contemporaneous levee set-back maps from the Louisiana Department of Public Works has been overlain on a current map of the project area in Figure 12. A sketch of a portion of the building complex on the plantation made by one of the Mississippi River Commission surveyors (Figure 13) allows us to identify some of the buildings formerly located in this area. The Chatsworth main house, labelled "House of Mr. Gardere" in the sketch, is shown under the centerline of the modern levee in Section 41. Apparently it had been moved from

Table 2. 1860 Agricultural Census Data on Fergus Peniston.

Acres	
Improved	1,300
Unimproved	1,500
Cash value of farm	$90,000
Value of farm implements and machinery	$25,000
Horses	7
Asses/Mules	3 or 13 [illegible]
Milk cows	35
Working oxen	23
Other cattle	25
Sheep	70
Swine	25
Value of livestock	$ 8,000
Bushels of Indian corn	15,000
Rice	0
Ginned cotton (bales 400 lbs each)	0
Wool (pounds)	300
Sugar cane (Hhds 1,000 lbs each)	425
Molasses (gals)	12,400
Beans and peas (bushels)	120
Irish potatoes (bushels)	150
Sweet potatoes (bushels)	225
Butter (pounds)	400
Value of animals slaughtered	$ 300

its previous location to make room for the 1881 levee setback. The two structures near it were service buildings, probably a detached kitchen and a smokehouse or shed. The structure located southwest of the main house between the 1869 and 1881 levees is labelled "Pump House" on the sketch map. Behind the main house, and outside of the present project area, was a long double row of worker's quarters, and beyond that was the sugar mill. The crop symbols used on the Mississippi River Commission map indicate that sugar cane was grown in the fields east and west of the main house, while corn was grown north of it. The structures shown in Section 77 appear to be in pasture areas, and may represent the house and outbuildings of the plantation manager or possibly a tenant farmer. Note that some of these structures were impacted by the 1890 levee setback or the excavation of borrow pits for the present levee in 1931.

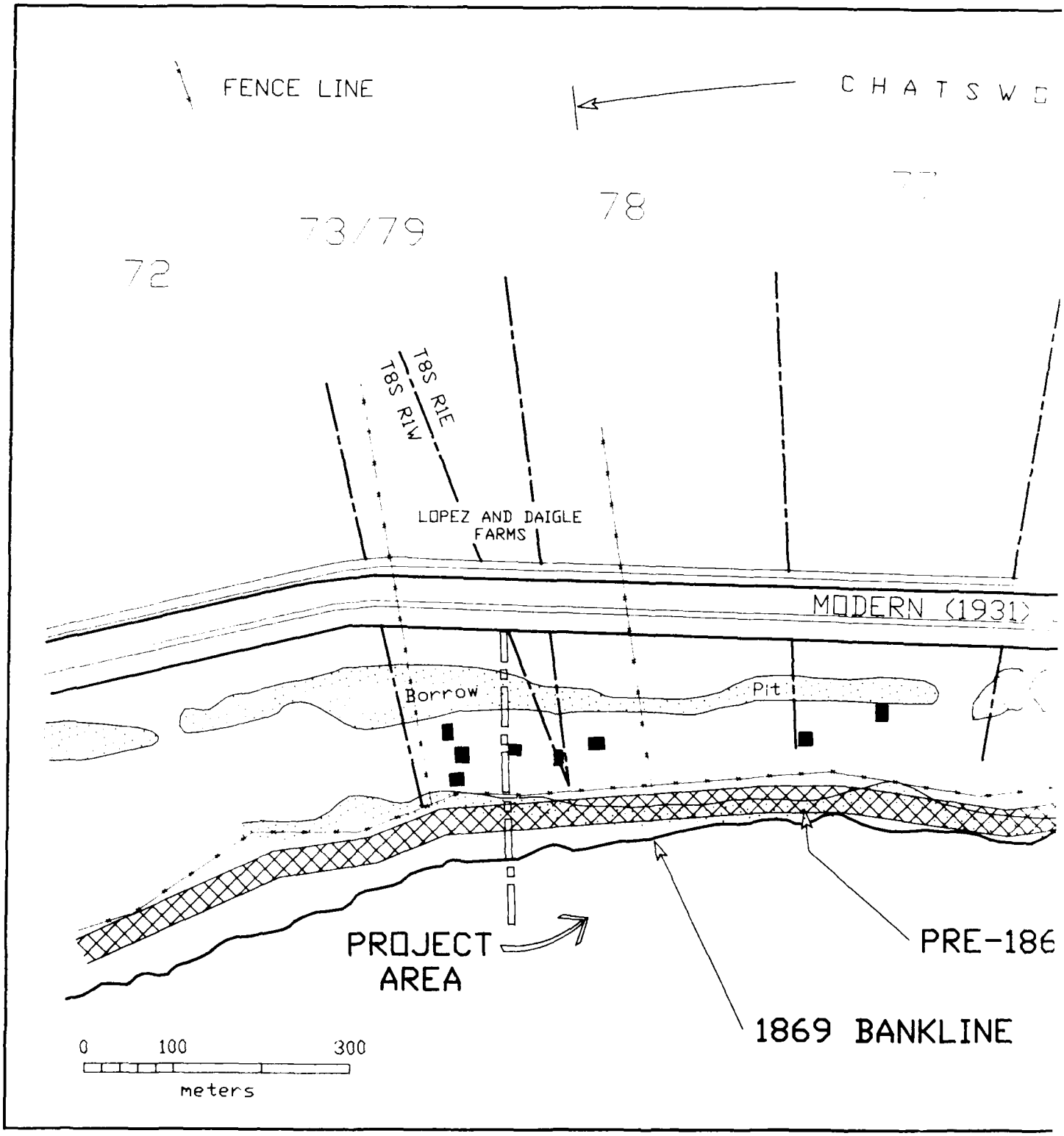
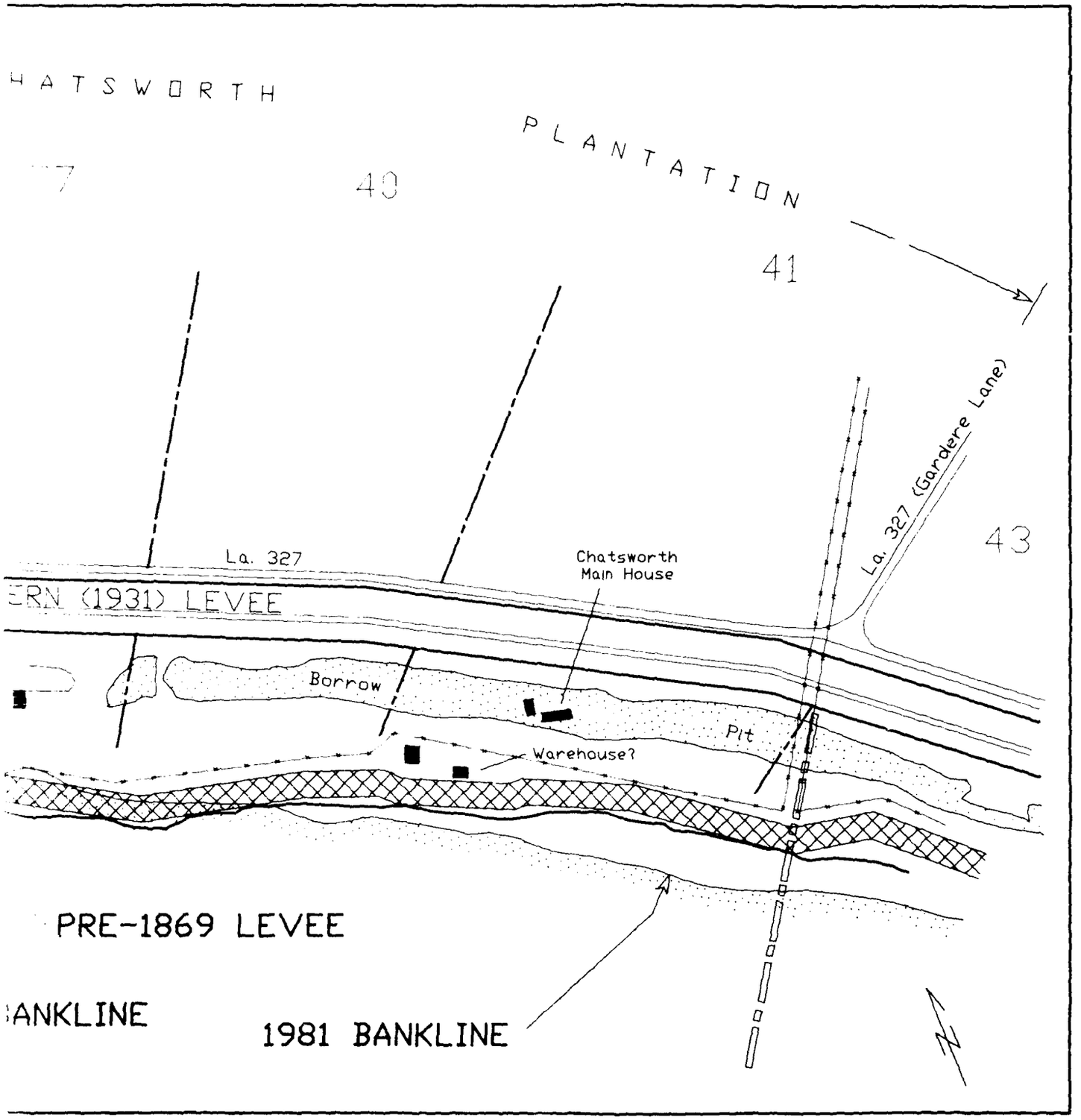


Figure 11. Location of structures in the Manchac Revetment area in 1869 (based on Louisiana Department



isiana Department of Public Works map of 1869).

Table 3. 1880 Agricultural Census Data on Fergus Gardere.

Acres	
Improved	1,000
Unimproved	1,000
Farm Value	$50,000
Estimated value of all farm productions	$47,000
Amount paid for farm labor	$17,000
Indian corn (acres)	200
Sugar cane (acres)	360
Sugar (Hhds.)	410
Molasses (Gal.)	31,254

Fergus Gardere continued to operate Chatsworth under the partnership arrangement until 1889 when he repurchased the interests of Eliza, Edward, and Riviera (East Baton Rouge Parish C.O.B. 11:43; East Baton Rouge Parish C.O.B. 12:192). Sugar production remained relatively low prior to that time, but it increased significantly in 1890, possibly as a result of the addition of a steam train, vacuum pan, and centrifugals to the Chatsworth sugar mill (Bouchereau 1890-91).

In 1894 Gardere, then 76 years old, sold a half interest in the plantation to Thomas A. Womack (East Baton Rouge Parish C.O.B. 17:345). Within the year Gardere died, and Womack purchased the other half interest in the plantation from his estate (East Baton Rouge Parish C.O.B. 19:29). Womack operated the plantation as the Chatsworth Sugar Company until 1903 when he sold it to a group of investors who renamed it the Chatsworth Planting and Manufacturing Company, Ltd. (East Baton Rouge Parish C.O.B. 30:30). In 1910, this group donated a lot of land located on the northwest side of the junction of Gardere Lane and River Road to the Catholic Church for the purpose of constructing a church there (Donation Book D:214). The church, known as the Mission Church of the Nativity, is shown on levee setback maps made in 1930 for the present levee (Figure 14). It was located in what is now the borrow pit for that levee. A school run by the church was situated on the opposite side of Gardere Lane. The only other structures on Chatsworth Plantation shown on these maps are the main house, located in Section 41, and a "cabin" (probably a worker's house) in Section 78. Both of these buildings were in the alignment of the present levee. Saxon's description of the Chatsworth main house from this period indicates that it was no longer being occupied. The plantation was sold at a Sheriff's Sale in 1928, and sugar production apparently ceased at that time (East Baton Rouge Parish C.O.B. 218:159).

The small area at the upstream end of the project area, which includes portions of Section 79 of T8S R1E and Section 73 of T8S R1W, has a very different history from that of the remainder of the area. With the exception of the period between 1820 and 1840 when Section 79 was a part of Laurent Daigre's larger plantation, these two sections were the locations of small farms until sometime in this century. The Persac map of 1858 shows them as small tracts of 1 3/4 and 2 arpents front belonging to

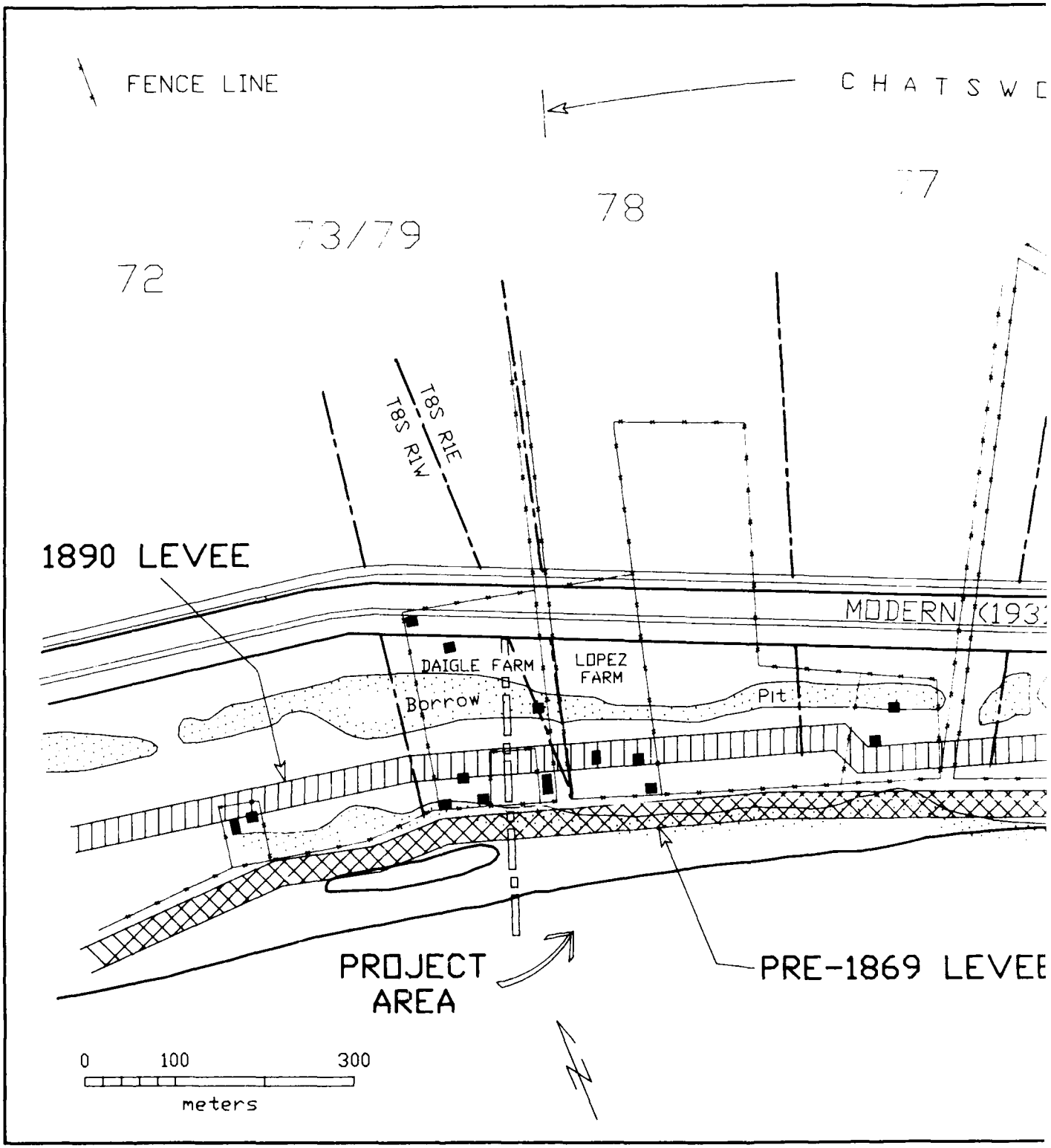
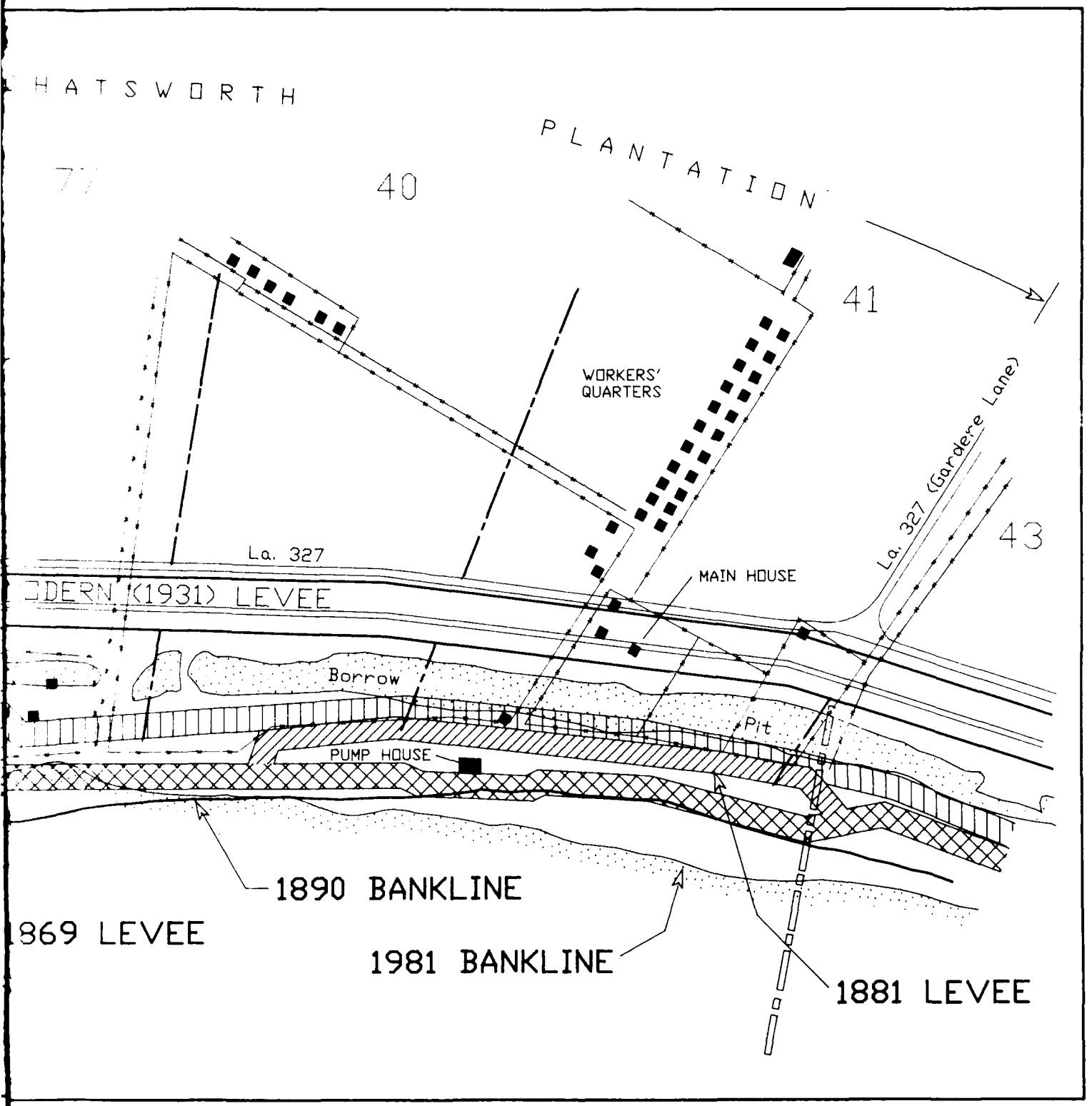


Figure 12. Location of structures in the Manchac Revetment area in the 1880s (compiled from Mississi Public Works map of 1890).



piled from Mississippi River Commission map of 1882/83 and Louisiana Department of

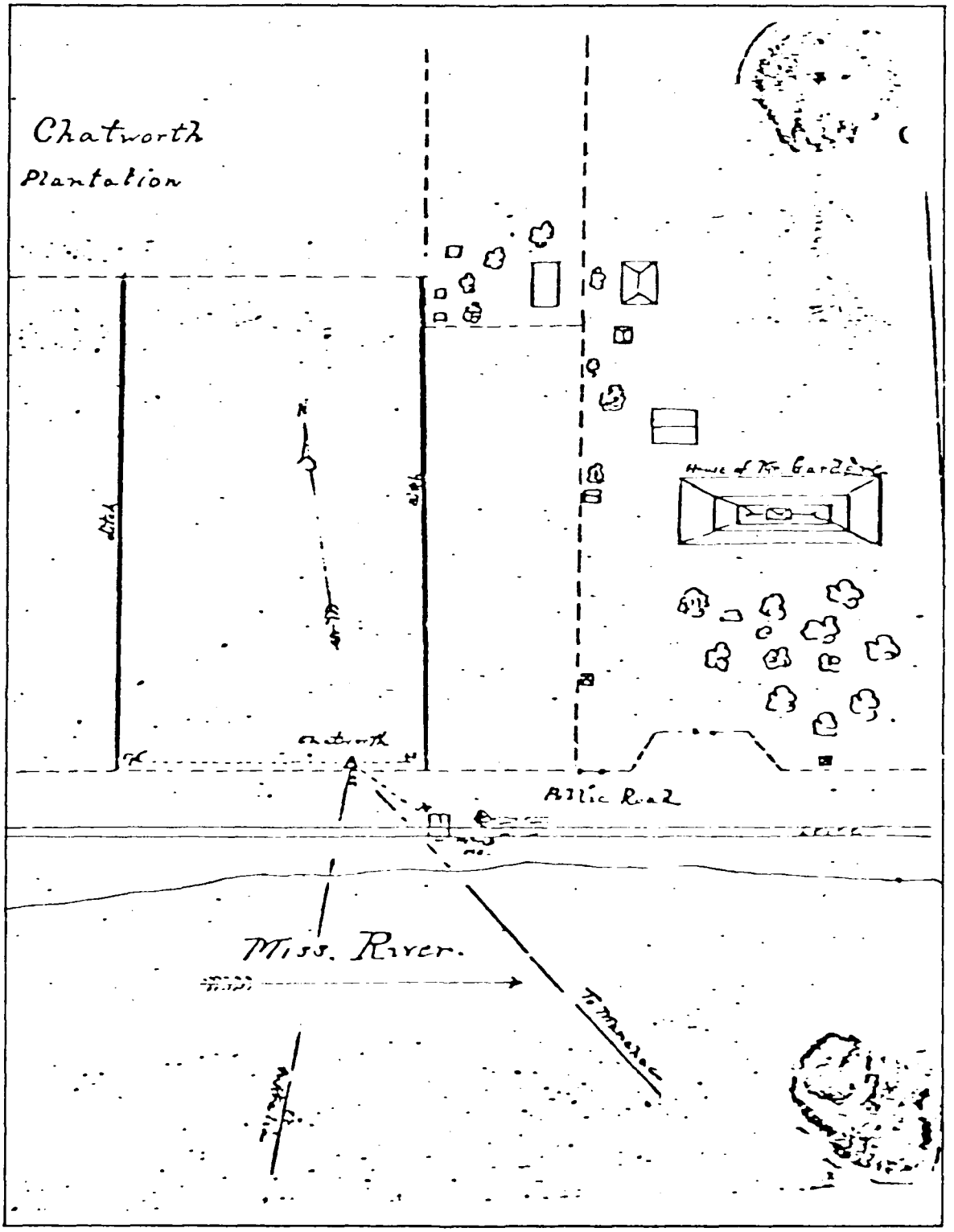


Figure 13. Plan of the main house complex on Chatsworth Plantation ca. 1880 (Anonymous n.d.).

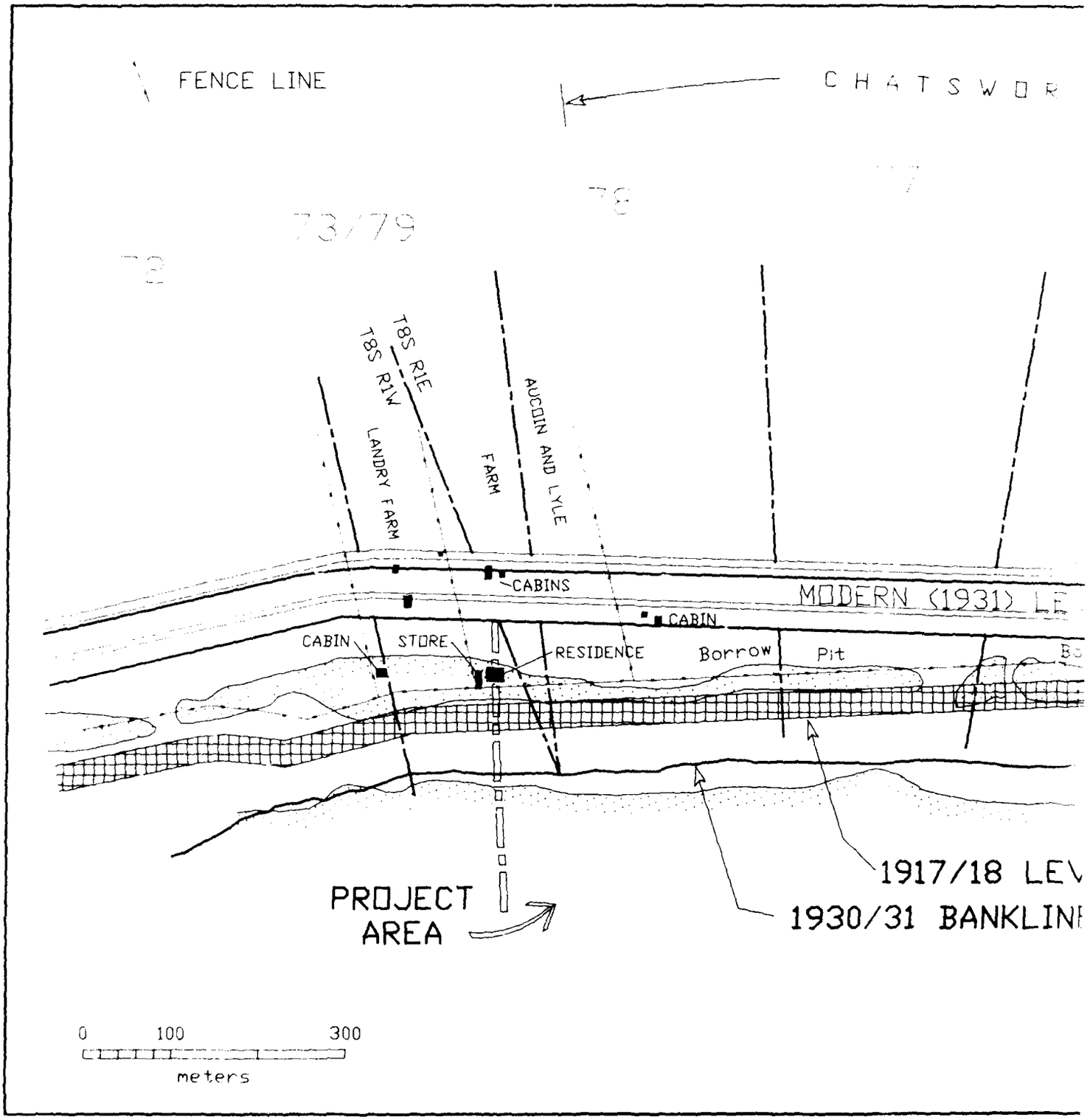
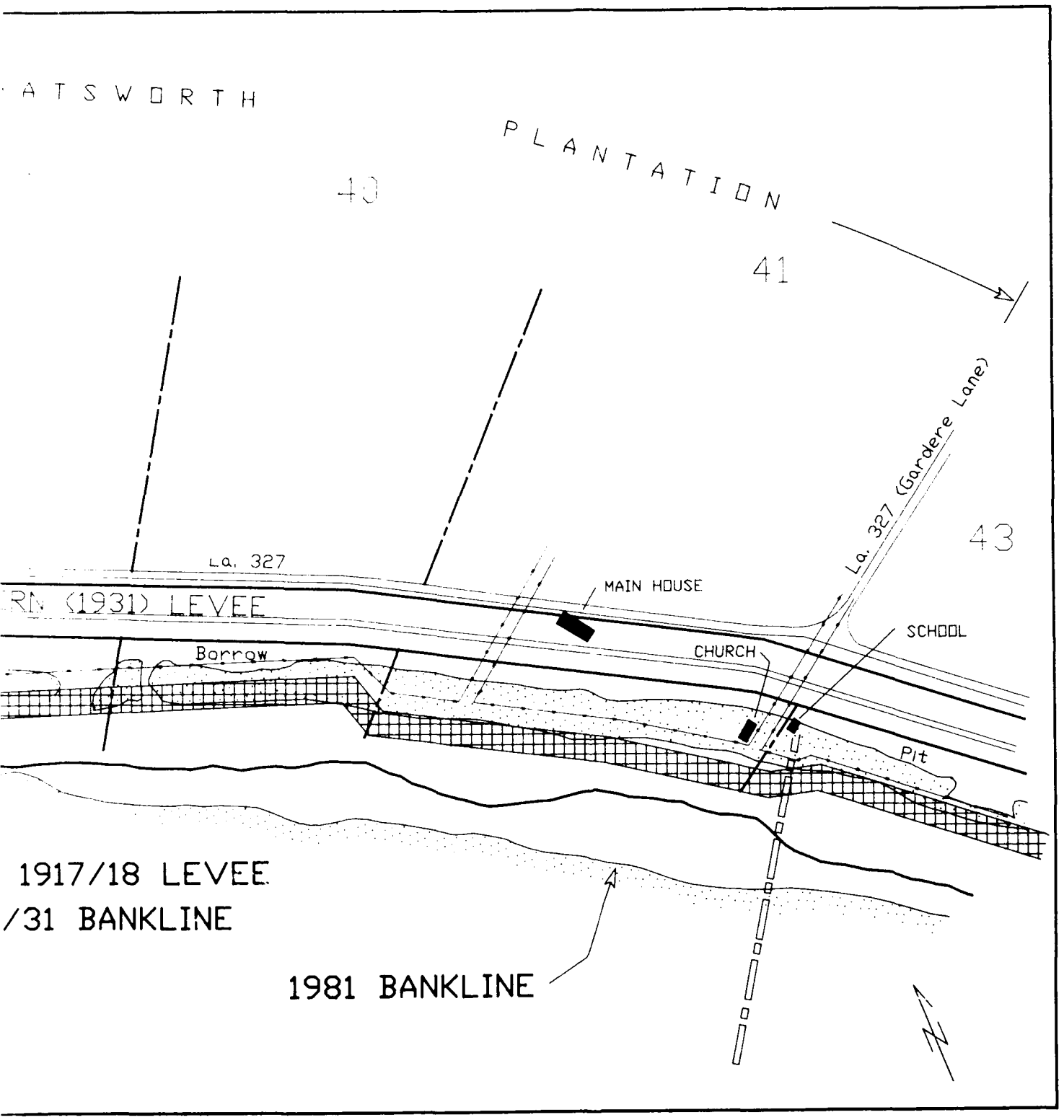


Figure 14. Location of structures in the Manchac Revetment area in 1930 (based on U.S. Army Corps of Engin



. Army Corps of Engineers map of 1930).

Zenon Daigle and J. Adonis Lopez. A woodyard was located near the lower boundary of the Lopez property. The Agricultural Census of 1850 indicates that Daigle or Daigre and Lopez were cultivating 70 and 60 ac, respectively, raising livestock, corn, and a small quantity of cotton (Table 4). Sugar cane was not grown on the properties until after the Civil War. The Louisiana Department of Public Works map of 1869 depicts the location of structures on the two properties, but it does not show the boundary between the farms, nor does it identify any of the buildings (see Figure 11). During the late 1870s and early 1880s Adonis Lopez and his son began producing small sugar crops ranging from 15 to 30 hogsheads (Table 5). They used a horse-powered portable cane grinder and a wooden sugar mill. The Agricultural Census of 1880 indicates that they cultivated a total of 80 ac with 40 planted in corn and 25 in sugar cane (U.S. Bureau of the Census, Agricultural Schedule 1880a).

The Mississippi River Commission map of 1882/83 shows the small farms of Adonis Lopez and Zenon Daigle upstream from Chatsworth Plantation in Sections 78 and 79 of

Table 4. 1850 Agricultural Census Data on Zenon Daigre and Adonis Lopez.

	Daigre	Lopez
Acres		
Improved	70	60
Unimproved	70	50
Cash value of farm	$ 5,000.00	$ 3,500.00
Value of farming implements and machinery	$ 60.00	$ 40.00
Horses	6	3
Asses and mules	0	2
Milk cows	6	1
Working oxen	4	4
Other cattle	0	6
Swine	5	0
Value of livestock	$ 300.00	$ 300.00
Bushels of Indian corn	730	730
Bales of ginned cotton (400 pounds each)	12	13
Bushels of peas and beans	6	10
Irish potatoes	3	0
Sweet potatoes	36	60
Butter	24	0
Tons of hay	1	0
Value of animals slaughtered	$ 10.00	$ 0.00

Table 5. Sugar Production on the Lopez Property (Bouchereau 1878-1885).

Year	Owner/Manager	Sugar (Hhds)
1878-79	J. A. Lopez & Son	30
1879-80	J. A. Lopez & Son	31
1880-81	J. A. Lopez & Son	31
1881-82	J. A. Lopez	Next Year
1882-83	J. O. Lopez	21
	J. A. Lopez	Next Year
1883-84	O. Lopez	18
1884-85	L. O. Lopez	13

T8S, R1E and Section 73 of T8S, R1W. The Lopez farm was immediately upstream from Chatsworth, and at that time it consisted of five structures located on either side of a small road leading off of River Road. All of these buildings fall within the present project area. The Daigle farm, located upstream from the Lopez property, also included five structures, but all of these were situated outside of the project area (see Figure 12).

These two farms remained intact into the 1930s and appear on the setback map for the present levee (see Figure 14). The Lopez farm was then owned by James Raymond Aucoin and Louis Vernon Lyle. It included a residence and a store located on River Road, a service building located behind them, and three "cabins" situated farther back from the road. All of these structures appear to have been impacted by the current levee or its borrow pit. The Daigle farm, then owned by G. Landry, consisted of four structures, all situated outside of the present project area.

Results of the Fieldwork

The intensive survey of the project area located two archeological sites, 16 EBR 70 and 16 EBR 71, both along the bankline of the river (Figure 15).

16 EBR 70

This site consisted of a large concrete slab found resting upside down just below top bank in Section 40 (Figure 16). It was 4.3 m long, 2.45 m wide, and 0.8 m thick and was composed of a gravel aggregate. A single large bolt was visible projecting from its surface, but others may be present. The only other artifacts present on the riverbank in this area were recent debris, bottle caps, and tin cans.

One auger boring and several shovel tests were excavated on the top bank adjacent to the concrete slab. The deposits encountered consisted of 15 to 30 cm of pale brown (10 YR 6/3) fine sand overlying 15 to 20 cm of brown (10 YR 5/3) clayey silt. Beneath that the auger boring revealed alternating lenses of yellowish-brown (10 YR 5/4), sandy silt, and grayish-brown (10 YR 5/2), clayey silt to a depth of 3.0 m. Although no

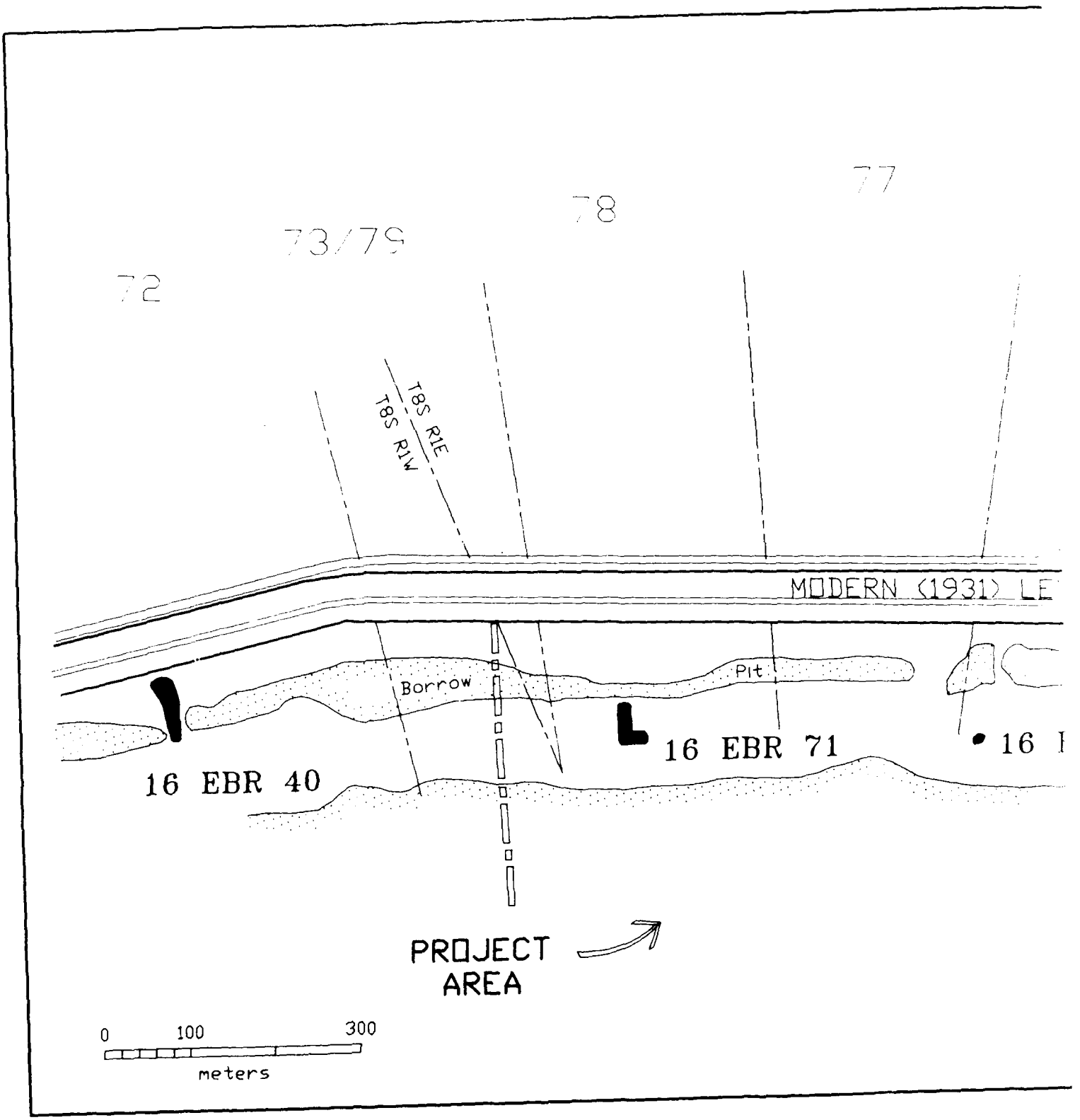
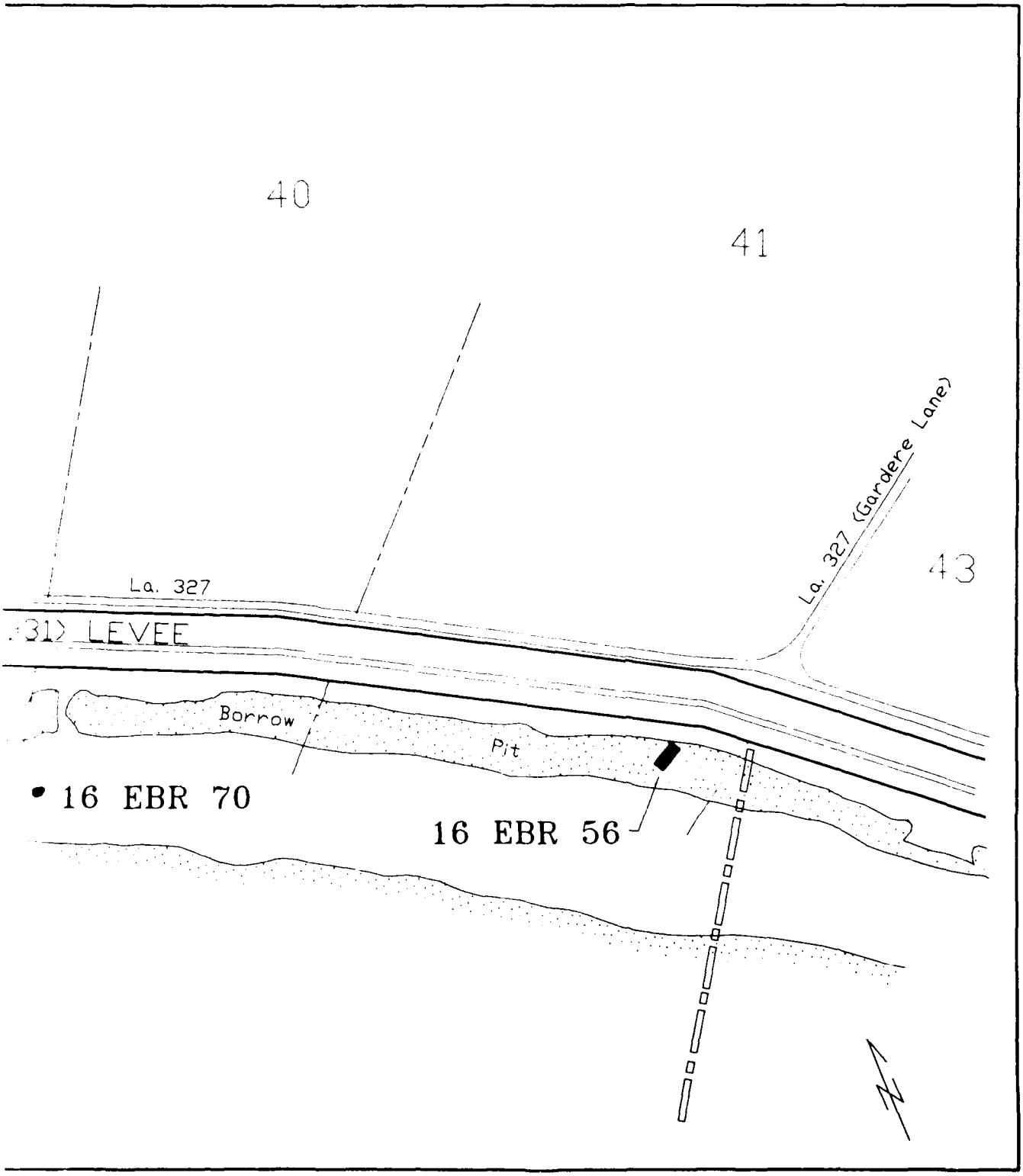


Figure 15. Plan of the Manchac Revetment area in 1981 showing site locations.


40
41
43
La. 327
La. 327 (Gardere Lane)
(31) LEVEE
Borrow
Pit
16 EBR 70
16 EBR 56

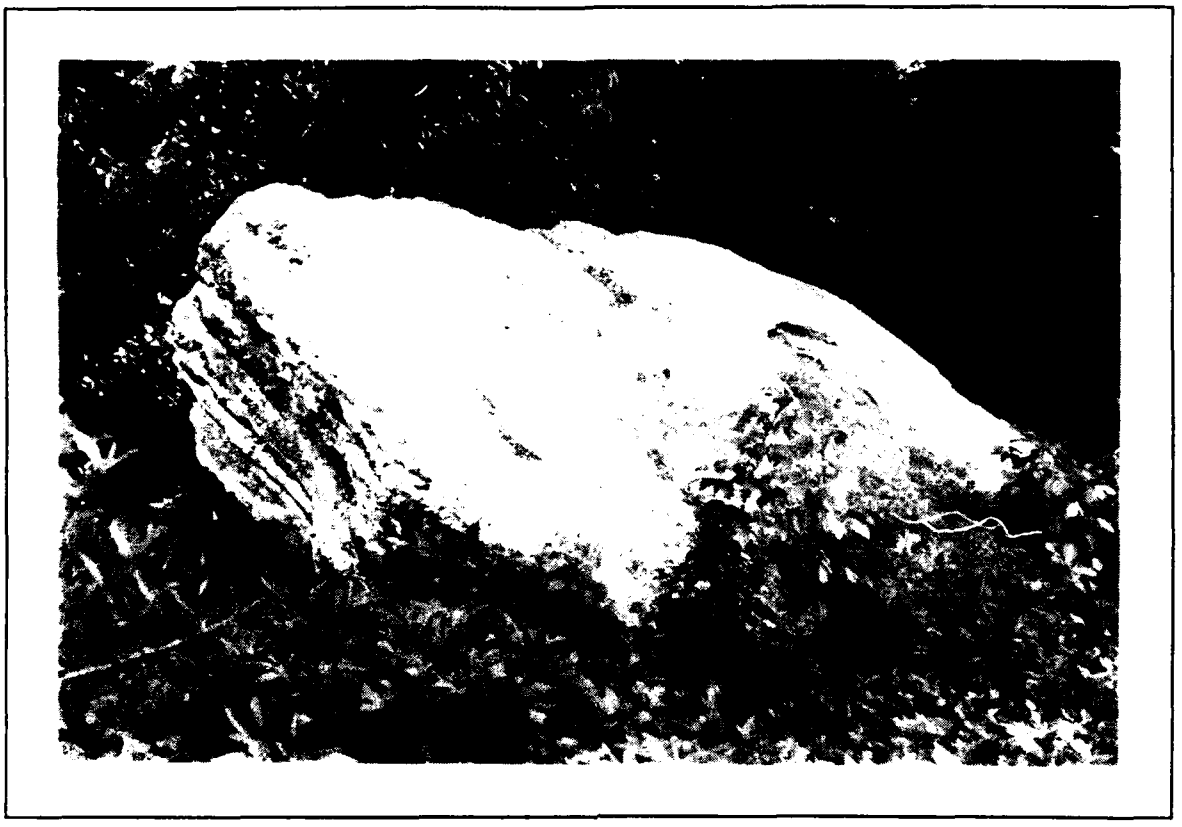


Figure 16. View to northeast of large concrete foundation at 16 EBR 70.

additional cultural material was located, it seems probable that the concrete slab was associated with a buried soil horizon represented by the brown clayey silt which occurred 15 to 30 cm below the surface. The underlying strata appear to represent earlier natural levee deposits.

Site 16 EBR 70 is interpreted as a foundation for a large piece of machinery, possibly a steam engine. Its age is uncertain at present. No structures appear in this location on Louisiana Department of Public Works maps dating to the 1860s, 1890s, 1910s, and 1930s or the Mississippi River Commission map of 1882/83. The foundation is not in situ, and no associated cultural material could be located.

16 EBR 71

This site was located in Section 78 and extended both along the riverbank (Area 1) and back from the riverbank along a drainage ditch (Area 2) (Figure 17). Area 1 consisted of a thin lens of cultural material which was eroding from the bankline approximately 35 to 40 cm below the ground surface. The lens could be traced along roughly 3 m of bankline, but artifacts were scattered on the surface of the lower bank over an area which measured 32 m east to west by 18 m north to south (Figure 18).

Two auger borings were excavated on the top bank in this area. Auger Boring 1 was placed 2 m back from the bankline adjacent to the eroding zone of cultural material.

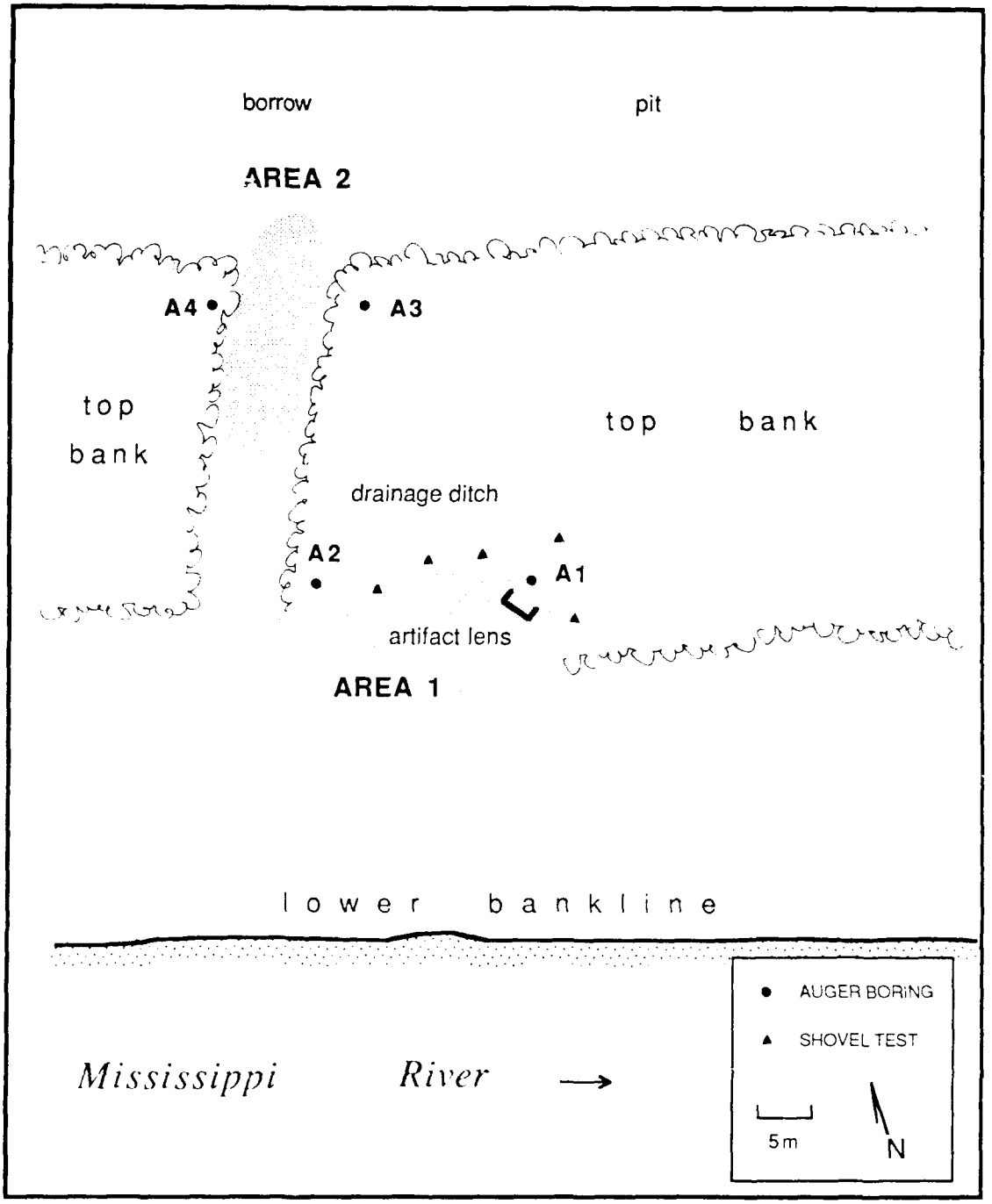


Figure 17. Plan of 16 EBR 71 showing location of two site areas and auger tests.

It encountered 35 cm of yellowish-brown (10 YR 5/4), fine sand overlying a brown (10 YR 5/3) clayey silt. The latter was oxidized from 35 to 50 cm below surface and appears to represent an old soil horizon. It is the stratum in which the cultural material occurred. This stratum extended to a depth of 125 cm below surface, but

Figure 18. View to northeast of Area 1 at 16 EBR 71.

based on the bankline exposure artifacts are limited to its upper 10 cm. Underlying the brown clayey silt was a mottled, very pale brown (10 YR 7/3) fine sand which was 30 cm thick. Beneath it was a layer of unoxidized brown (10 YR 5/3) clayey silt which extended to a depth of at least 300 cm below the surface.

Auger Boring 2 was placed 20 m west of Auger Boring 1 and 3 m back from the bankline. The stratigraphic sequence there began with a brown (10 YR 5/3) silt deposit which extended 35 cm below the surface and was underlain by 80 cm of oxidized dark brown (10 YR 4/3), clayey silt. From 115 to 190 cm was an oxidized dark brown, (10 YR 3/3) silty clay. That in turn was underlain by 110 cm of unoxidized brown, (10 YR 5/3) silty clay. The differences in the stratigraphy in the two borings are difficult to explain. It is possible that the area of Boring 2 was disturbed by excavation of the drainage ditch located immediately west of it.

Neither of the auger borings yielded cultural material, so several shovel tests were placed along the top bank in the vicinity of Area 1. All of these encountered the buried soil horizon at 35 to 50 cm below the surface, but no artifacts were recovered in any of them. The remaining portion of the cultural deposits in Area 1 may therefore be limited to the small lens exposed in the bankline.

Table 6 summarizes information on the artifacts recovered from the surface of the riverbank in Area 1. The ceramics consisted predominantly of plain whiteware sherds,

Table 6. Material Recovered from 16 EBR 71.

	AREA 1	AREA 2
CERAMICS		
Refined Earthenware		
Creamware		
Soup Plate		
plain		1
Flatware		
plain		2
Unidentified		
plain		1
Whiteware		
Handle		
plain	1	
Hollowware		
annular	1	
plain	1	
Plate		
plain	4	
Unidentified		
plain	2	
Yellowware		
Hollowware		
annular	1	
Porcelain		
Unidentified		
plain	1	
Stoneware		
Hollowware		
albany-slipped (int.), salt-glazed (ext.)	2	
GLASS		
Bottle		
Cylindrical		
Machine-made		
clear	2	
clear green	1	
Mold-made		
lipping tool mark		
brown	1	
Beveled Rectangular		
Machine-made		
clear blue, "Dodson's Liver Tone"	2	
Mold-made		
lipping tool mark		
clear, "Royaline Cough Syrup"	1	
Elixir		
clear	1	
Unidentified		
clear	1	
METAL		
Brass		
fork	3	
flashlight	1	
cartridge (.38)	1	
strap	2	
unidentified	3	
Iron		
fork	1	
fork Handle	1	
can	6	
COAL	6	
SHELL		
Oyster	2	
COLUMN TOTALS	48	4
TOTAL		52

with smaller quantities of stoneware, yellowware, and porcelain. No dateable marks were present, but the stoneware with an albany slipped interior and a saltglazed exterior was popular from 1850 to 1900 (Greer 1981:197, 263). The annular yellowware sherd would also suggest a date between 1830 and 1900. Glass artifacts included two complete patent medicine bottles embossed "Dodson's Liver Tone." The bottles were machine-made and therefore probably date after 1903. Two other complete bottles were mold-made, and the lips were finished with a lipping tool, suggesting that they probably pre-date 1917. Considered as a whole the collection suggests that Area 1 probably represents a late-nineteenth to early-twentieth century domestic occupation. Its location suggests that it was associated with structures on the Lopez farm (see Figure 12).

Area 2 of 16 EBR 71 was located north of Area 1 along a drainage ditch which ran from the borrow pits to the riverbank (see Figure 15). Four sherds of creamware were found on the surface of the bottom of this ditch over an area roughly 6 m by 19 m. All four sherds were plain, but at least two vessels are represented based on form (see Table 6).

In an effort to identify the source of these artifacts the banks of the drainage ditch were carefully examined, but no lenses of cultural material could be located. An auger boring was then excavated on the ground surface on either side of the drainage ditch. The stratigraphic sequence revealed in the two borings was similar. The upper 65 to 95 cm consisted of a yellowish-brown (10 YR 5/4), fine sand. Beneath that to a depth of 3.0 m was a brown (10 YR 5/3), clayey silt with minor oxidation in its upper 15 to 30 cm. The latter is the same buried soil horizon noted in Area 1. No other old land surfaces were identified underlying it.

Given the limited data available from Area 2 it is difficult to offer an interpretation of this area. The presence of creamware and the absence of later material suggests that it represents the location of a late-eighteenth- or early-nineteenth-century occupation, rather than heirlooms associated with the occupation of Area 1. Unfortunately, intact deposits related to this occupation could not be identified.

16 EBR 56

The former location of the Mission Church of the Nativity was recorded previously as archeological site 16 EBR 56 on the basis of documentary information gathered by the National Park Service (1984). As indicated by the map overlays prepared during the present study, the location of the church falls within the borrow pit for the current levee (see Figure 14). No evidence of the structure was noted during the present survey.

16 EBR 40

This site was located outside of the Manchac Revetment Area, but because of its position in the probable access road to the area the Scope of Services for the present study requested that the site be relocated and its significance assessed.

The site was originally recorded by Shenkel (1976) during a survey of proposed levee enlargement and slope-paving areas. He described it as "a thin scatter of Rangia shells between the flood side toe of the present levee and the abandoned levee marking the left bank of the Mississippi River between borrow pits both up range and down range at levee station 560 + 00" (Shenkel 1976:1). Shenkel found two sherds of grog-tempered plain aboriginal pottery on the surface of the shell and recorded it as a

prehistoric site. George Castille, then with the Louisiana Division of Archaeology, revisited the site the following year and suggested that the shell had been introduced as fill and was not in situ.

The present survey crew had no difficulty relocating the site. It was situated on the river side of the present levee in Section 72. The shell occurred in a road leading from the levee to a navigation light located on the riverbank. Figure 19 presents a view of the site area from the levee looking south. In order to determine the nature of the shell deposit, the survey crew excavated a series of shovel tests and one auger boring through it. The majority of the tests were excavated along the margins of the road because of the dry and compacted nature of the shell matrix within the road. Figure 20 presents a map of the site area showing the limits of the shell and the locations of the subsurface tests. The shell deposit ranged from 10 cm to over 30 cm thick in the tests, with the thicker and more compact portions of the deposit occurring in the northern part of the site. A north-south profile across the site is shown in Figure 21.

No prehistoric artifacts were noted during the test excavations; however, historic materials, including bottle glass and brick fragments, were recovered from four of the shovel tests (Table 7). These materials occurred within the shell deposit, often near its base.

Figure 19. View to south of 16 EBR 40.

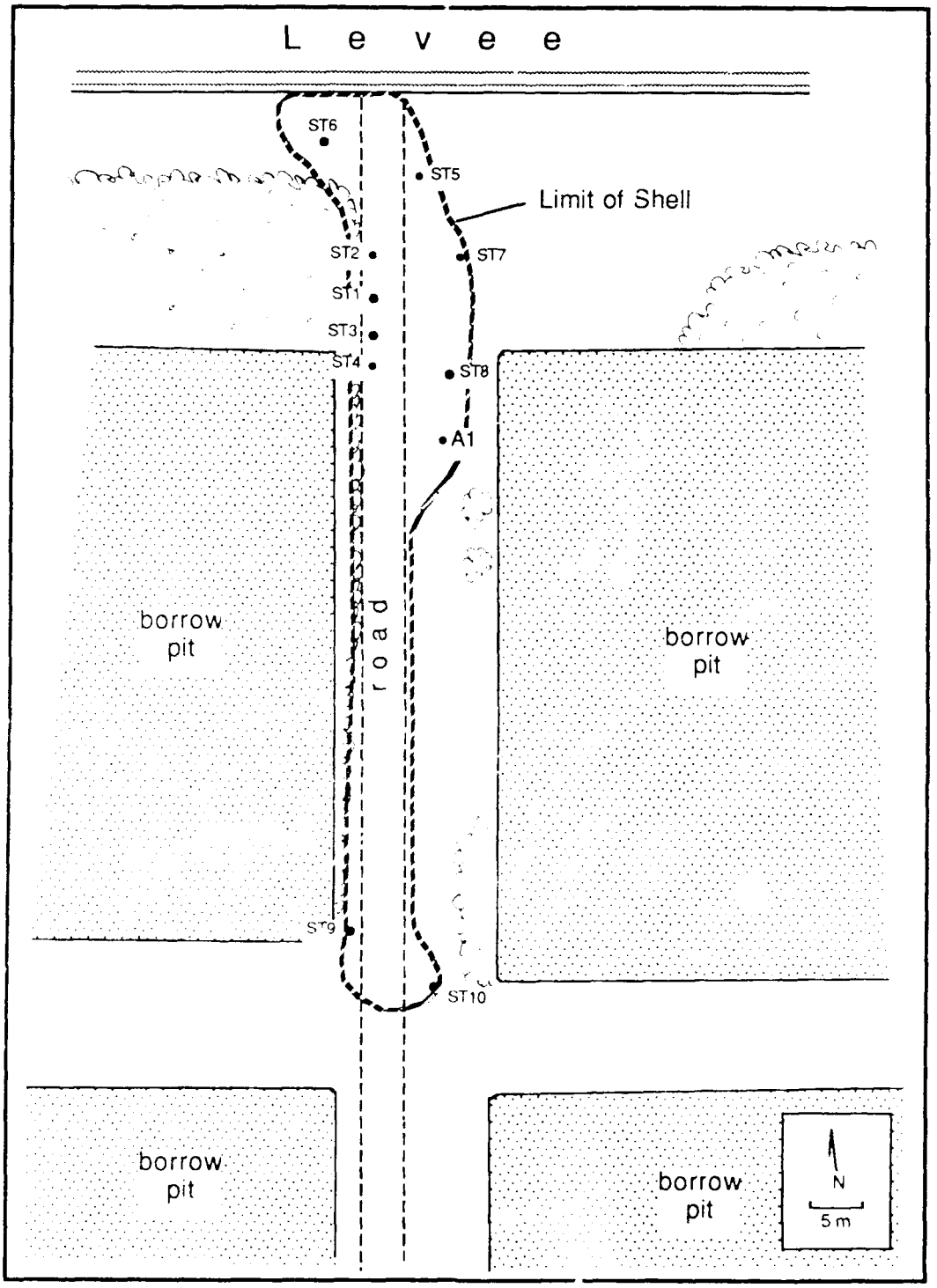


Figure 20. Plan of 16 EBR 40 showing auger and shovel test locations.

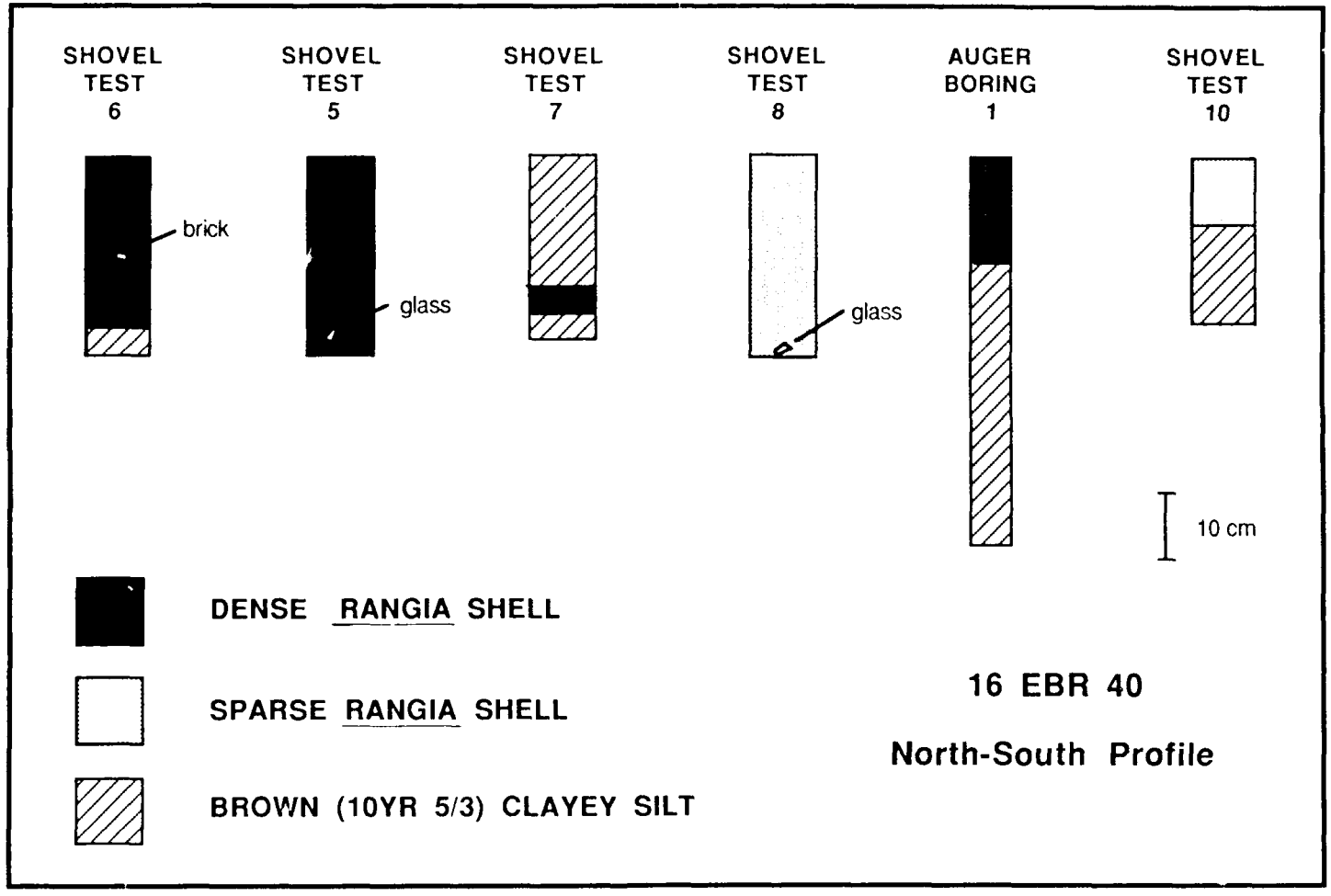


Figure 21. North-south profile based on subsurface tests at 16 EBR 40.

Table 7. Material Recovered from 16 EBR 40.

	ST 3	ST 5	ST 6	ST 8
GLASS				
Bottle				
Cylindrical				
Unid. mfg. tech.				
clear		1		
olive	1			3
BRICK				
Fragments			2	
COLUMN TOTALS	1	1	2	3
SITE TOTAL				7

The results of the test excavations suggest that the shell deposit recorded as 16 EBR 40 has been brought into the area in the recent past as road fill. The fact that two prehistoric sherds were recovered from the site in the past suggests that an aboriginal shell midden may have been the source for the shell matrix.

Marchand Revetment Area

Location and Description

The Marchand revetment area was located on the left descending bank of the Mississippi River between River Miles 178.7 and 180.2 (Ranges D-87 to D-20), approximately 4.0 km above Donaldsonville, in Ascension Parish, Louisiana (Figure 22). The area to be examined was 7750 ft (2362 m) long and extended 500 ft (152.4 m) back from the riverbank.

The subsurface deposits within the project area consist of extensive point bar deposits. Fisk (1944:Plate 22) associated these with Stages 11, 13, and 15 through 18 of his Mississippi River channel sequence, but as noted by Saucier (1974) only the historic channels can be considered reliably dated. Utilizing recent boring data Saucier (1969) has mapped the area as being composed of point bar deposits overlain by 3 to 6 m of natural levee deposits. Historic maps examined during the course of the present research and observations made during the fieldwork suggest that a significant portion of the upper deposits within the project area were formed not in a natural levee environment, but as a result of historic crevasses.

Since the 1850s, when the first large-scale maps were available for this area, there have been numerous levee breaks and setbacks along this stretch of the river. The bankline in the northern and central portions of the project area retreated approximately 900 m during this period. The causes of this unusually high rate of erosion are apparently a combination of the geometry of the bend immediately upstream and the coarse point bar deposits which make up the area. One consequence

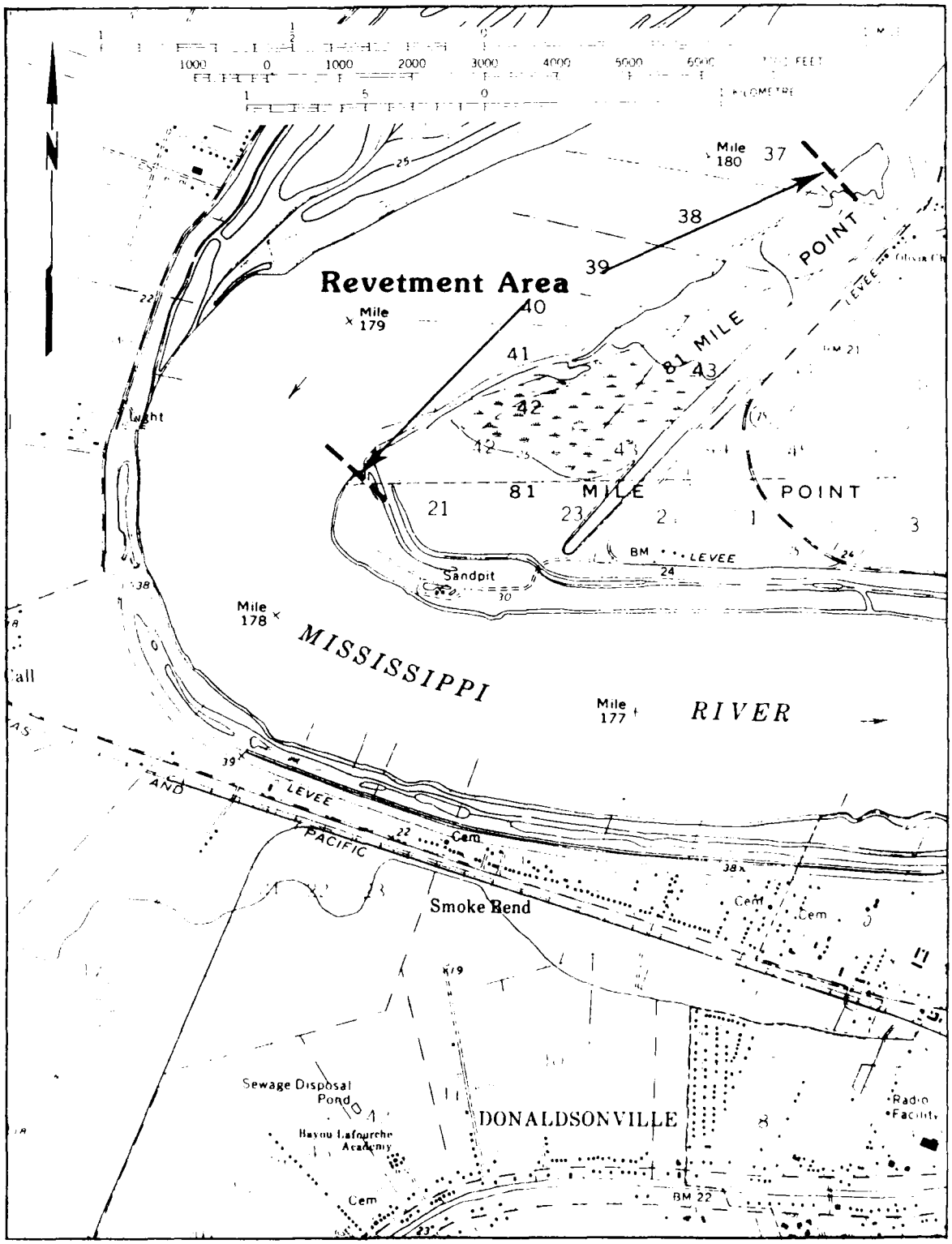


Figure 22. Location of Marchand Revetment area (base maps are U.S.G.S. Belle Rose 7 1/2' Quadrangle, 1974 and U.S.G.S. Carville 7 1/2' Quadrangle, 1974).

of this rapid bankline retreat for archeology is that areas along the river that were occupied even as late as the 1880s are now gone. In addition, the numerous levee breaks have permitted large quantities of generally coarse crevasse deposits to accumulate in the area. Observations made during the fieldwork indicate that in portions of the northern and central project area these deposits exceed 2.0 m in thickness.

Because of the high rate of erosion, which still characterizes this area, the bankline throughout much of the project area was relatively steep. The unusually low stage of the river at the time of the fieldwork resulted in exposure of 5 to 6.5 m on this bankline. The upper 2.5 to 3 m were nearly vertical and composed predominantly of coarse crevasse deposits. Beneath them lay natural levee and point bar deposits which sloped more gradually down to the waterline.

Back from the bankline the project area was covered by a bottomland hardwood forest. In the southern part of the area, where erosion has been less severe and a portion of an earlier levee still protects it from flooding, the trees are mature and there is little undergrowth. However, in the northern and central portions of the project area where alluviation rates have been high, the forest canopy is more open and there is an abundance of low brush, briars, and vines.

History of Land Ownership and Use

The initial European settlement of the vicinity of the project area was apparently by Acadian immigrants in the late 1760s or early 1770s. Five tracts within the project area were surveyed in 1773, and then granted to the heads of Acadian households in 1775 (Maduell 1975). Beginning at the northern end of the project area, Section 37 was granted to Estevan (Stephen) Landry, Section 38 to Armand Babin, Section 39 to Pedro (Pierre) Leblanc, and Sections 40 and 41 to Simon Landry. Although documentation of their activities is unavailable, they probably established small farms, raising cotton and corn. The locations of their houses and fields would have been along the river at the front of their tracts. At that time the river was over one kilometer west of the northern and central portions of the project area, most of which were probably uncleared.

As the original grantees died their lands were usually divided between their widows and children, resulting in a gradual reduction in the size of landholdings (Brasseaux 1987:106). This practice, plus the arrival of new immigrants in the 1780s made it increasingly difficult to make a living from agriculture in this area. Consequently, during the late-eighteenth century many Acadian families chose to sell their small tracts of land along the Mississippi River and move to the prairies of southwest Louisiana.

At about this same time sugar cane cultivation was beginning to expand because of improvements in the granulation process. During the first two decades of the nineteenth century, sugar planters, many of them Anglo-Americans, purchased large numbers of the former Acadian farmsteads and consolidated them into plantations. While this pattern was widespread in adjacent portions of Ascension Parish, it was apparently uncommon in the present project area. In the late 1820s only one property in this area, that of Paul Landry, was producing a small quantity of sugar (Degelos 1892:65). Small farms continued to occupy much of the area into the middle nineteenth century, and at least two of these were still growing cotton as late as 1858 (La Tourette 1845; Persac 1858). One of the reasons for this may have been the area's susceptibility to crevassing. Sugar planters may have been unwilling to invest large

sums of money in property that was both frequently overflowed and rapidly eroding.

The problem of crevassing apparently worsened after the Civil War. During the late 1860s and 1870s there were several levee setbacks along this reach, and in each case the numerous houses lying along the river road were moved back to its new location. Figure 23 shows the location of structures in the vicinity of the project area during the early 1880s based on the Mississippi River Commission map of 1882/83 and contemporaneous Louisiana Department of Public Works levee setback maps. Most of these building sites are now 200 to 500 m out in the river, but the land use symbols on the Mississippi River Commission map provide information on the types of activities taking place in the project area at that time. Sections 38 and 39 were occupied by rice fields belonging to J. Marchand and Mrs. B. Myre. Sections 40, 41 and much of 42 were still wooded, probably because they were poorly drained. The downstream end of the project area was in sugar cane fields, belonging to N. Bel.

Continued bankline erosion resulted in further levee setbacks during the late 1880s and 1890s. The structures located behind these levees were gradually shifted back until an extensive setback in 1914 resulted in the relocation of the entire community into the present project area. Figure 24 shows the locations of these structures overlaid on a current map of the area. The information was derived from a 1932 Board of State Engineers map prepared prior to setting back the levee to its present location. Nineteen houses and 23 associated outbuildings fall within the northern and central portions of the project area. Most of these houses were situated along the river road, which lay at the foot of the levee. The lots on which they were located were generally 40 ft wide and ran back several hundred feet from the road. In a few cases, however, lots of 80 or 120 ft wide are apparent. Two stores were also present in the community, one in Section 38 and the other in Section 39, and a hall belonging to the Sunrise Benevolent Society was set back from the road between the two stores. The Mount Olive Baptist Church was situated near the downriver end of the community, and a cemetery was located on the property to the rear of the church.

Considering the size of the lots in this community, its residents were by this time probably workers on nearby plantations rather than yeoman farmers. Extensive rice fields were present downriver from the community and large sugar plantations were located upriver.

The levee was again set back in 1932, and at that time all of the structures were removed from the present project area. Some of them were probably moved to new locations on the landside of the present levee, as was the Mount Olive Baptist Church, but others may simply have been demolished. Since that time the area has returned to forest. The riverbank in this area is now used to tie up barges waiting to have their contents unloaded onto sea-going cargo ships.

Results of the Fieldwork

The intensive survey of the project area located six historic archeological sites (Figure 25). One of the sites, 16 AN 45, was situated near the downstream end of the area and close to its landside limit. The five remaining sites, 16 AN 46, 16 AN 47, 16 AN 48, 16 AN 49, and 16 AN 6, were all located along the riverbank in the northern half of the area.

16 AN 45

This site was located through shovel testing near the downriver end of the project

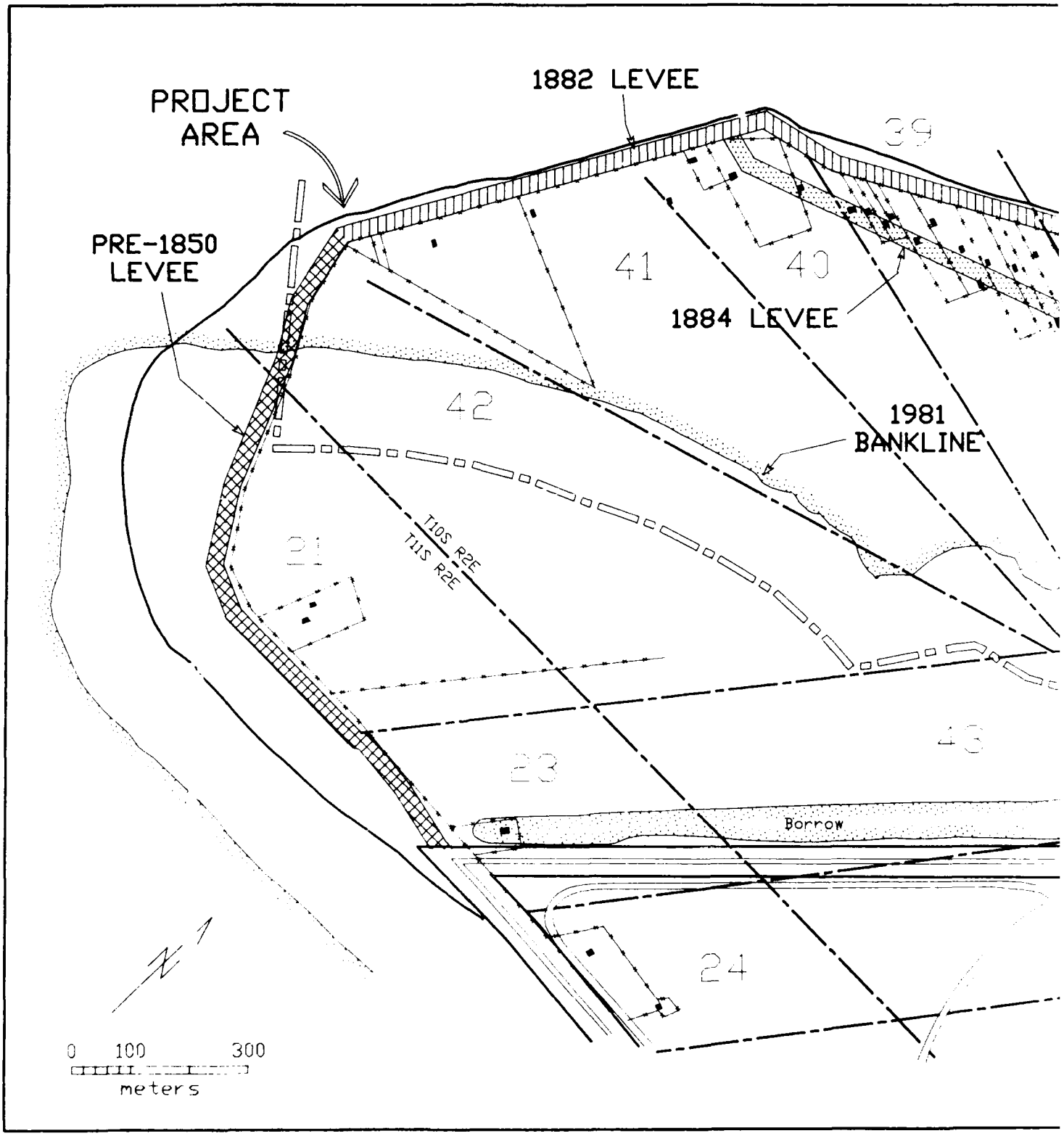
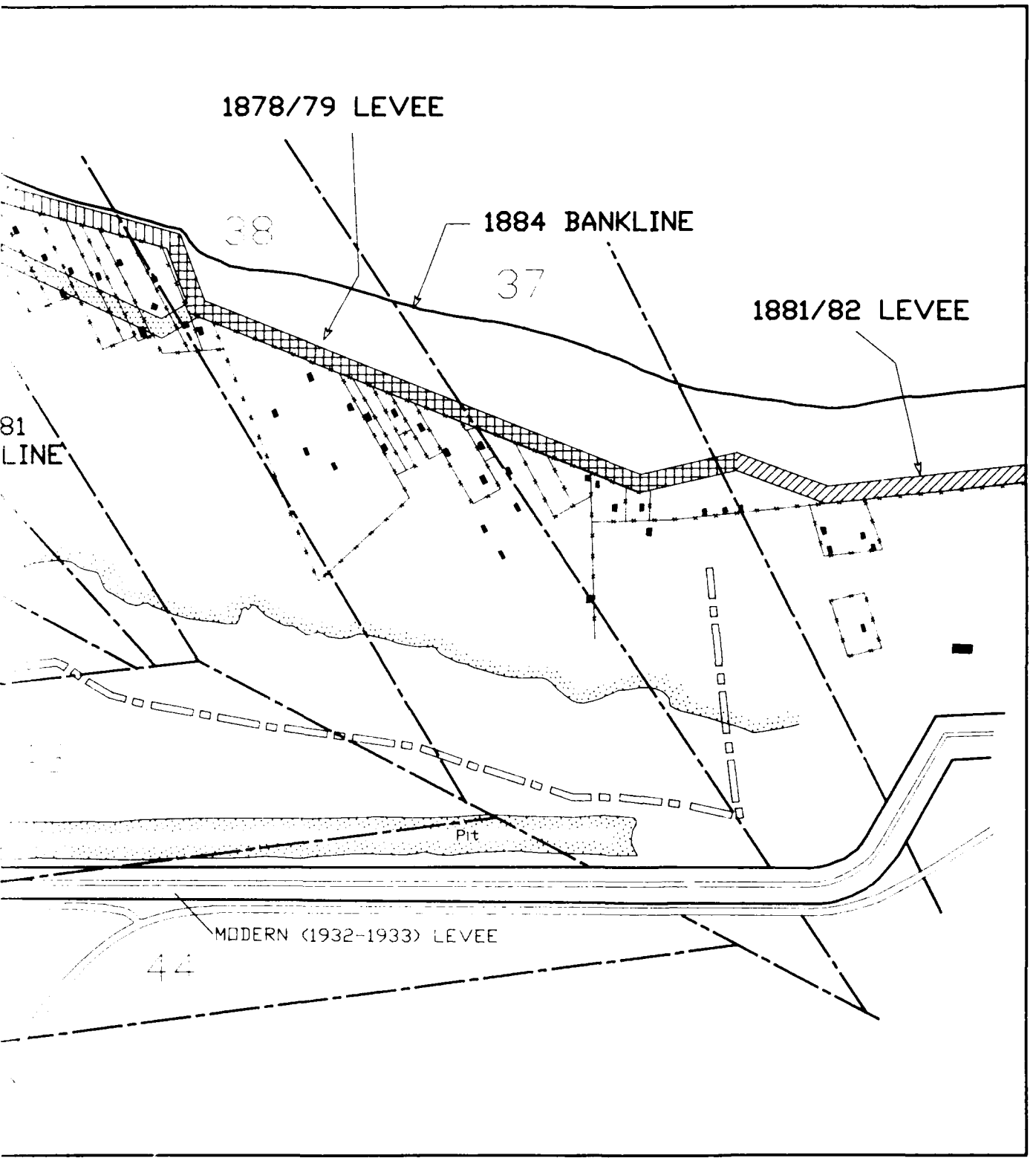


Figure 23. Location of structures in the Marchand Revetment area in the early 1880s (based on Mississippi R



...Mississippi River Commission map of 1882/83).

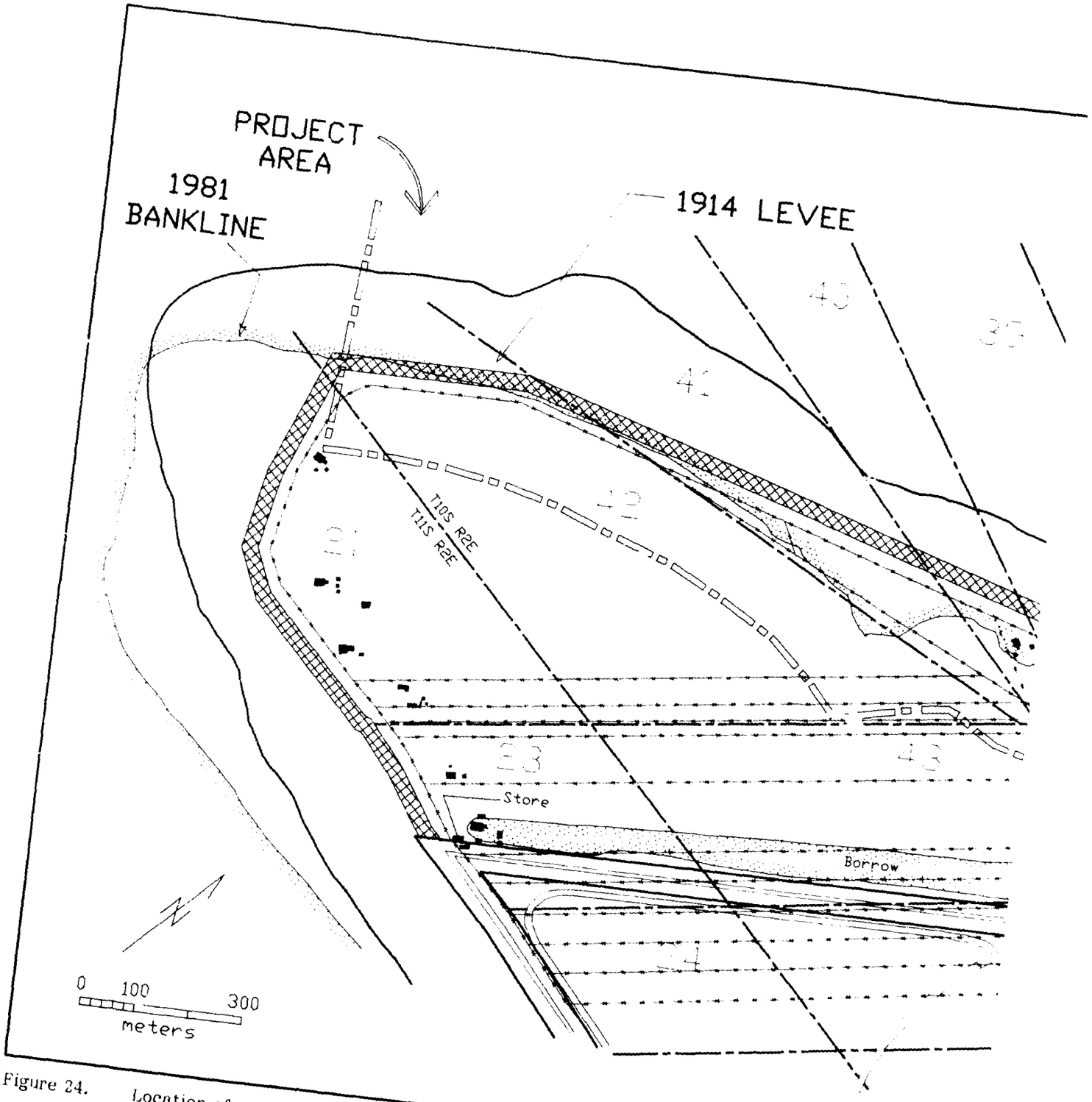
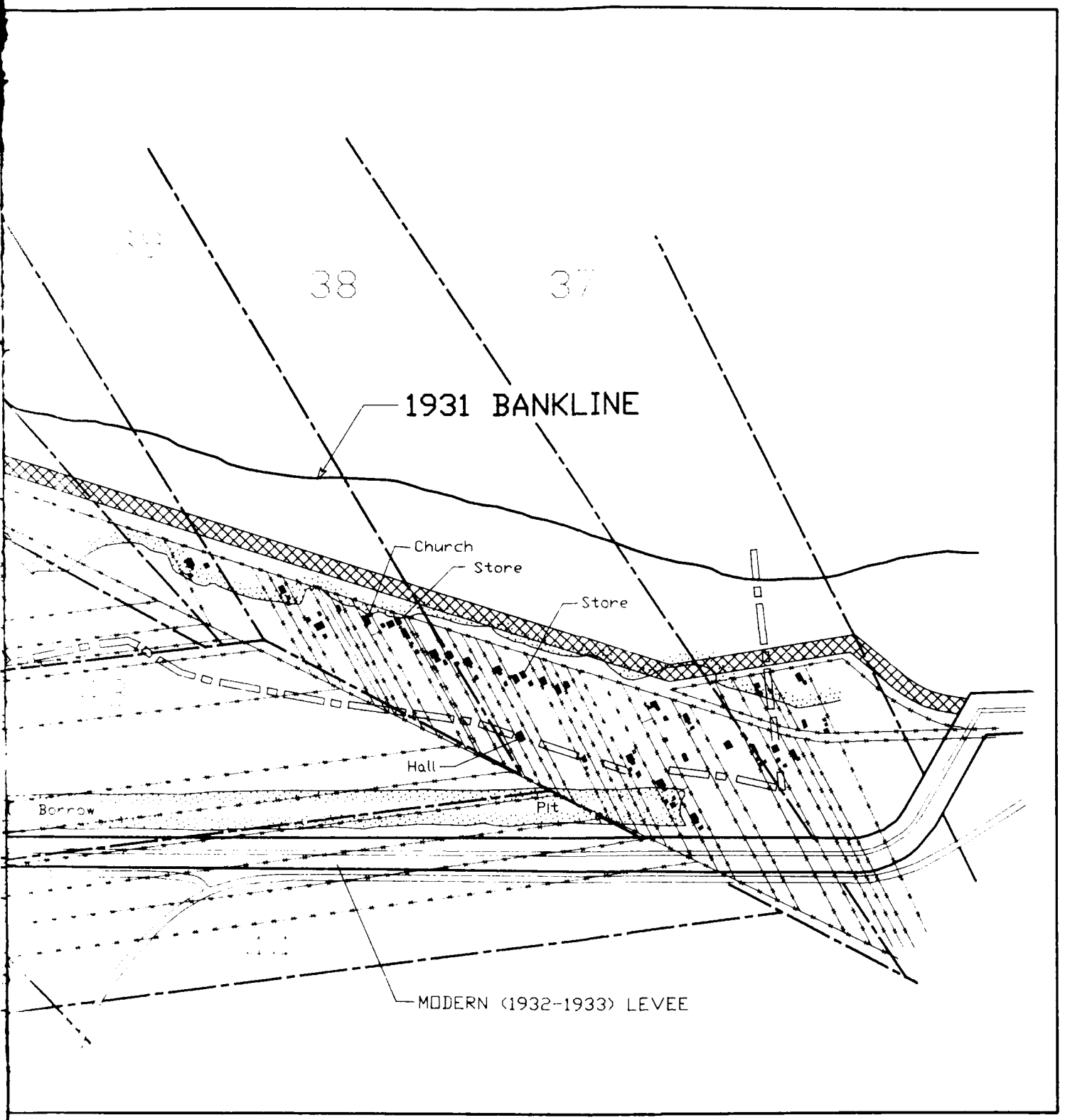


Figure 24. Location of structures in the Jarehand Revetment area in 1932 (compiled from Board of State Er



n Board of State Engineers map of 1932).

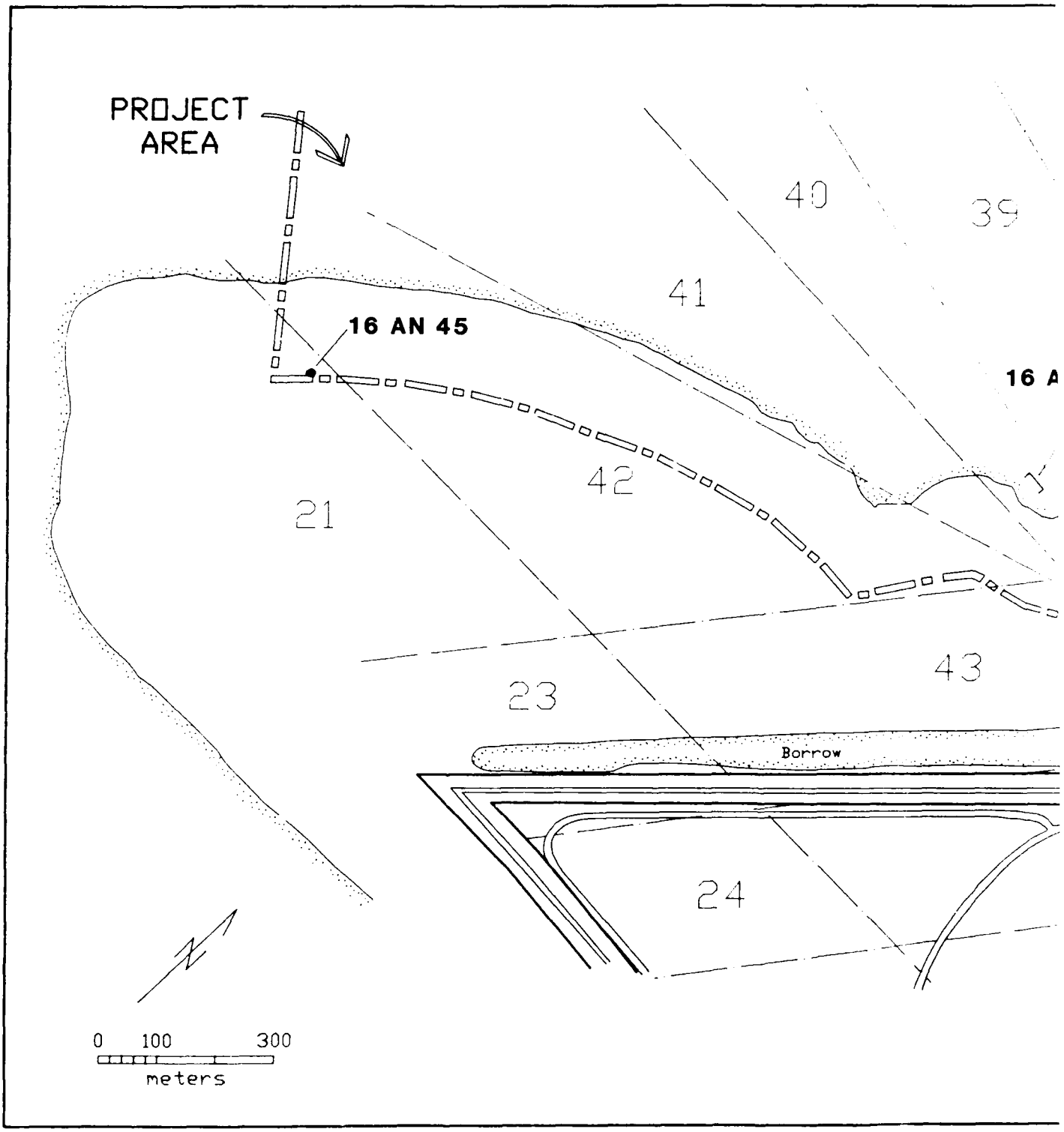
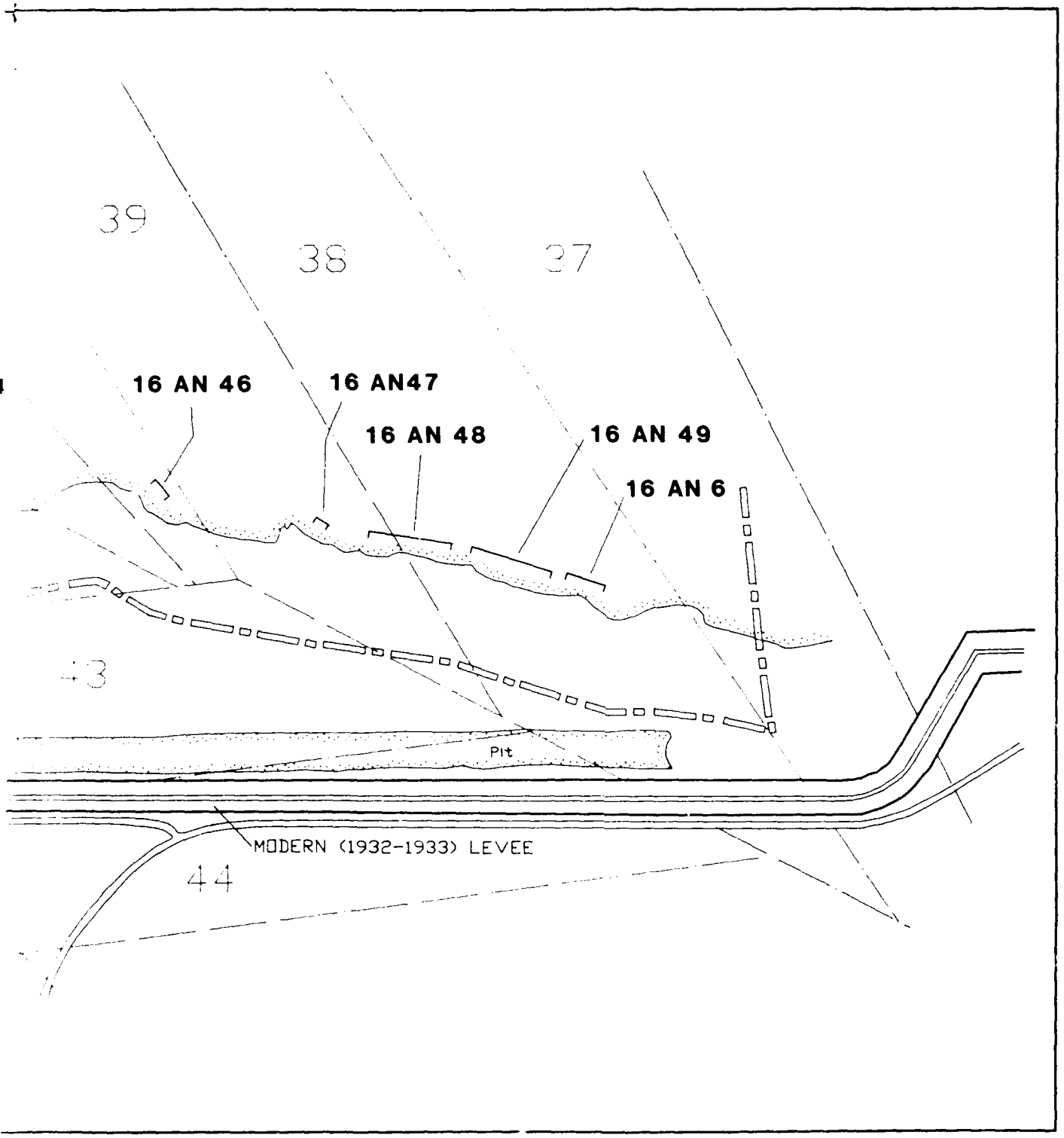


Figure 25. Plan of the Marchand Revetment area in 1981 showing site locations.


39
38
37
16 AN 46
16 AN47
16 AN 48
16 AN 49
16 AN 6
43
Pit
MODERN (1932-1933) LEVEE
44

area. It consists of a scatter of historic artifacts approximately 10 m in diameter found on either side of a small drainage ditch (Figure 26). The material occurred at depths of 5 to 20 cm below the surface in a mottled brown (10 YR 5/3), silty clay, a natural levee deposit. Ten shovel tests were excavated in this area, and four of these yielded artifacts (Table 8). The most common items were wire nails and fragments of barbed wire. The site is interpreted as a small late-nineteenth or early-twentieth-century sheet midden located in an area of former cultivated fields. A house was shown a short distance south of this location on the 1932 levee setback map, and it is possible that the site is related to that structure (see Figure 24).

16 AN 46

This site consists of two roughly cut granite blocks and a scatter of barbed wire fragments found eroding from the riverbank in Section 40. The artifacts occurred ca. 1.0 m below the top bank at the contact between an upper, light yellowish-brown, (10 YR 6/4) sandy silt and a lower very dark gray (10 YR 3/1), oxidized clay. The two blocks, each ca. 35 cm long, 30 cm wide, and 10 cm thick, were located ca. 65 m apart, and the barbed wire fragments occurred near the upstream block (Figure 27). Neither of the blocks appeared to represent an in situ structural feature. Their stratigraphic position was at the base of historic crevasse deposits and overlying earlier slackwater flood deposits. It seems probable that they represent structural remains which were removed from their original contexts and redeposited at some later time in their present locations.

16 AN 47

This site consists of a thin zone of widely scattered historic artifacts found eroding from the riverbank near the central portion of Section 39. The zone occurred ca. 1.8 m below top bank and could be traced intermittently along the bankline for 43 m. The artifacts occurred in the upper portion of a mottled brown (10 YR 5/3), silty clay. This was overlain by lenses of highly oxidized, dark grayish-brown (10 YR 4/2) clay, and above that lay approximately 1.5 m of thickly bedded sands. Also exposed at the level of the artifacts was a partially intact brick pier.

In an attempt to define the landward limits of the site, an auger boring was excavated on the top bank ca. 10 m back from the bankline (Figure 28). The stratigraphic sequence encountered in the boring was similar to that exposed in the bankline, but it was not possible to identify the cultural deposit.

Artifacts were relatively sparse in the eroding cultural deposit, but more were present on the surface of the lower bankline. This is where most of the present collection was obtained (Table 9). The collection is relatively small and consists predominantly of sherds of plain whiteware, cylindrical bottle fragments, nails, and other metal items. No maker's marks were present on the ceramics, and none of the bottle fragments could be identified as to manufacturing technique. The best chronological indicator is the wire nail which post-dates 1880. Considered as a whole, the collection suggests a late-nineteenth- or early-twentieth-century date for the occupation. The site appears to represent a sheet midden and partially intact structural element associated with one or more of the houses located in this area during the early-twentieth century.

16 AN 48

This site is located ca. 75 m upstream from 16 AN 47 on the boundary between Sections 38 and 39. Like the previous site it consists of a thin zone of cultural

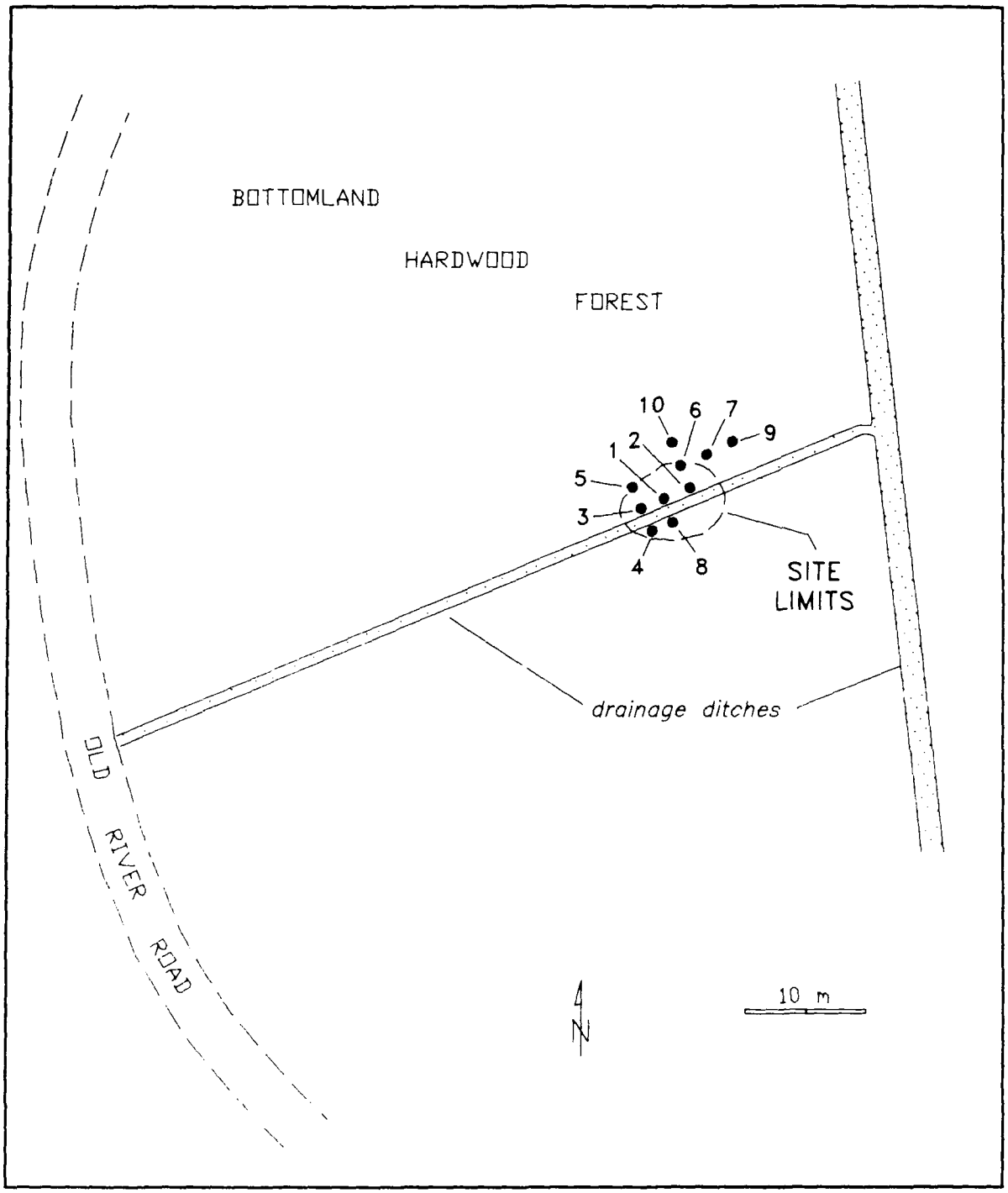


Figure 26. Sketch map of site 16 AN 45.

Table 8. Material Recovered from 16 AN 45.

	ST 1	ST 2	ST 3	ST 8
METAL				
Nail				
wire	1	7		
Iron				
barbed wire			8	
unidentified		2	2	
BRICK				
Fragment				1
COLUMN TOTALS	1	9	10	1
SITE TOTAL				21

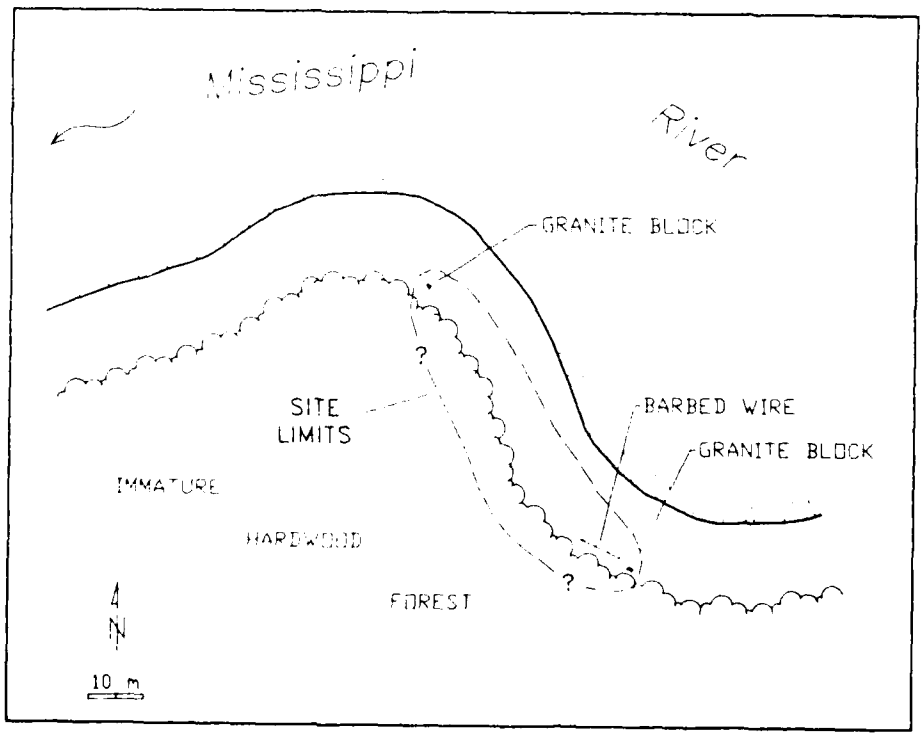


Figure 27. Sketch map of site 16 AN 46.

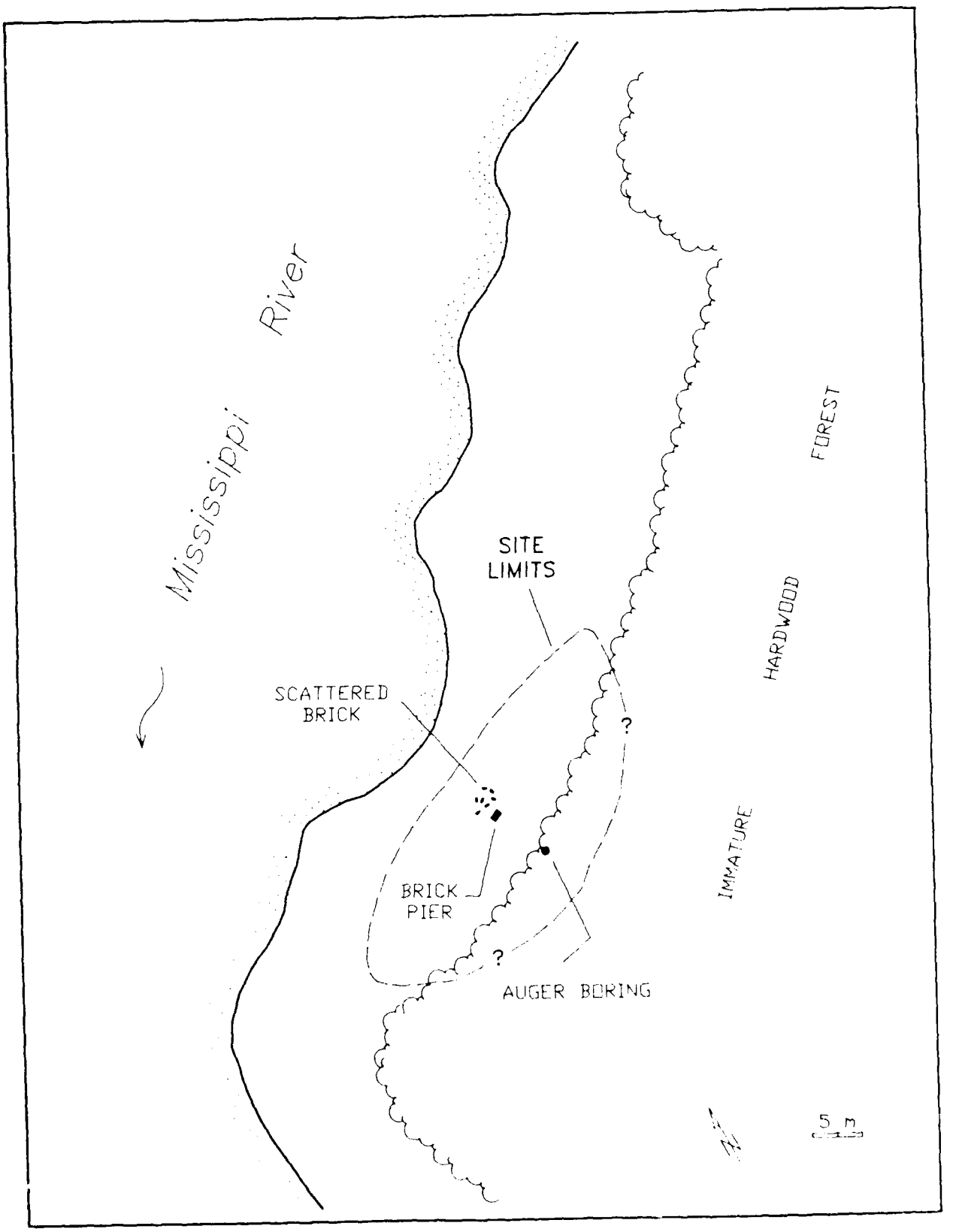


Figure 28. Sketch map of site 16 AN 47.

Table 9. Material Recovered from 16 AN 47.

	SURFACE
CERAMICS	
Refined Earthenware	
Whiteware	
Saucer	
plain	1
Unidentified	
plain	6
Porcelain	
Plate	
plain	1
GLASS	
Window	
clear green	2
Bottle	
Cylindrical	
Unid. mfg. tech.	
clear	1
clear blue	1
olive	1
Panel	
Unid. mfg. tech.	
clear	1
Unidentified	
clear blue	1
METAL	
Hand wrought	
hinge	1
Nail	
wire	1
square	1
unidentified	1
Iron	
can	1
wire	1
unidentified	1
BONE	
Pig	1
SITE TOTAL	23

material which is eroding from the bankline ca. 2.0 to 2.5 m below top bank. This zone was identified in three areas, labelled 1, 2, and 3, which extend a total of 122 m along the bankline (Figure 29).

The stratigraphic sequence in all three areas was similar and is illustrated by a profile done in Area 3 (Figure 30). The upper 170 cm of deposits consisted of thickly bedded sand strata separated by faint humus zones and, near their base, thin clay lenses. These are interpreted as historic crevasse deposits which have formed since the disappearance of the 1914 levee. Beneath the sandy strata were thinner layers of brown (10 YR 5/3) and dark grayish-brown (10 YR 4/2) silt loam, silty clay, and clayey silt. These are believed to represent slackwater flood deposits which formed after the levee was set back in 1932, but before the 1914 levee was breached by the river. Underlying these deposits was a thin layer of sparse artifacts and gravel occurring in the upper portion of a gray (10 YR 5/1) silty clay. This is the cultural zone at the site, and it is resting on a natural levee deposit. An auger boring was excavated on the top bank ca. 2 m from the bankline As at 16 AN 47, it was not possible to identify the cultural deposit in the boring because of the sparsity of artifacts.

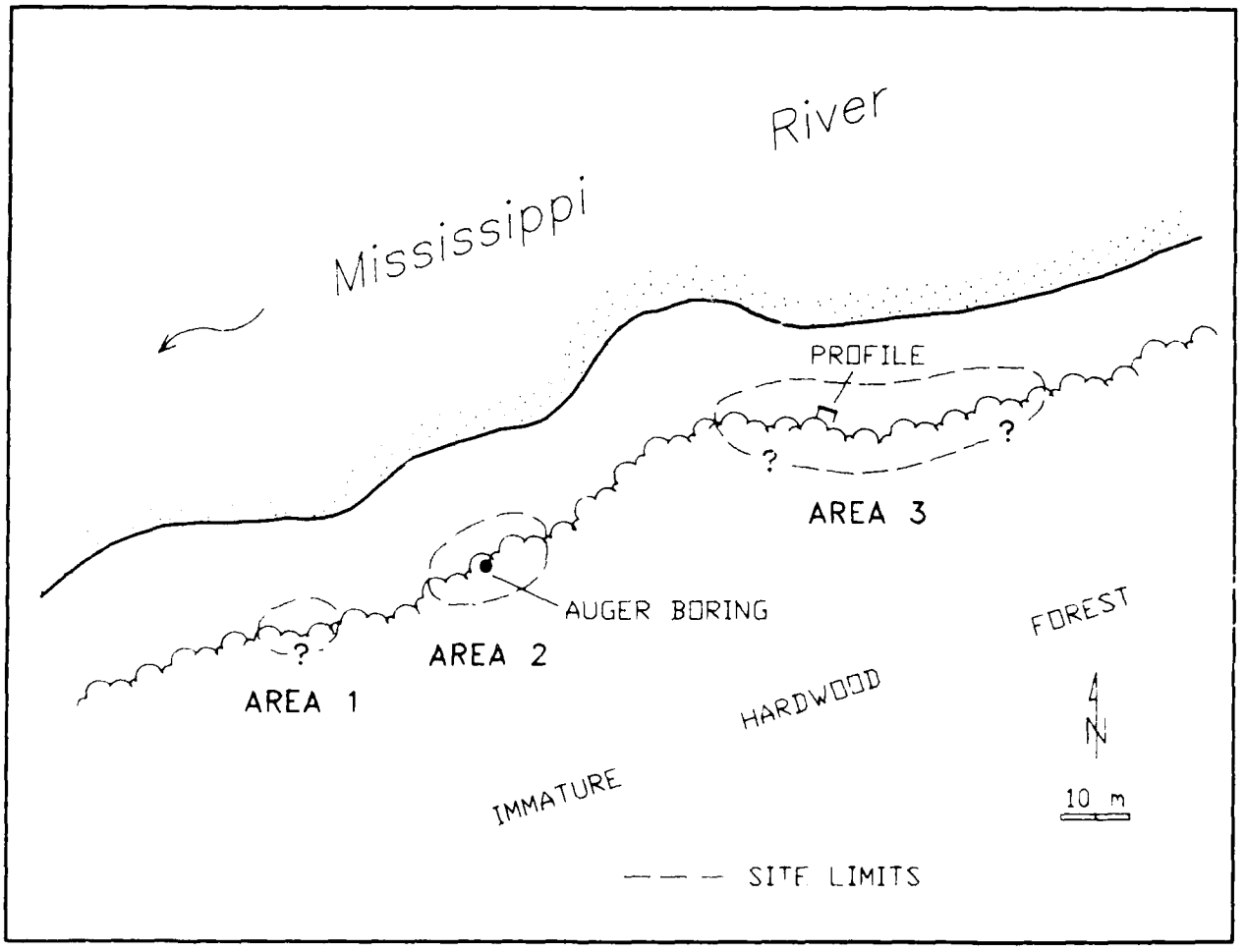


Figure 29. Sketch map of site 16 AN 48.

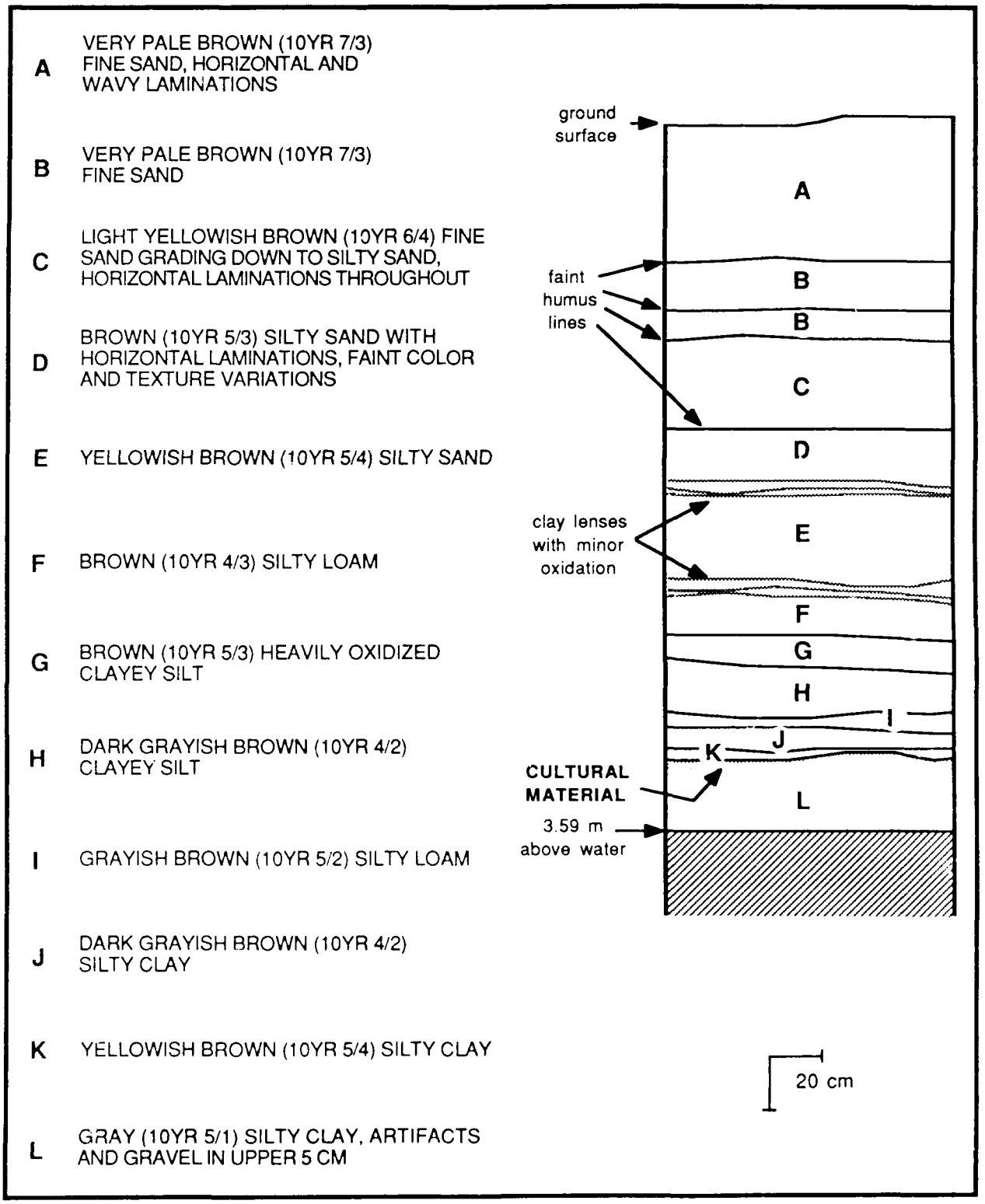


Figure 30. Stratigraphic profile of Area 3 at 16 AN 48.

The collection obtained from the site came predominantly from the surface of the lower bankline beneath the exposed cultural deposits. Table 10 summarizes information on this material. Area 1 produced only a small quantity of metal artifacts. Area 2 yielded sherds of plain and transfer-printed whiteware and rockingham stoneware, one nearly complete bottle and several pieces of bottle glass, and a few wire and square nails. The nearly complete bottle was a mold-made type of beveled rectangular form. Automatic bottle-making machines were patented in 1903, and accounted for approximately half of the total bottle production by 1917. This bottle therefore probably dates prior to 1917. Embossed on the side of the bottle was the label "C Damschinsky Liquid Hair Dye." Fike (1987:122) notes that this firm appeared in advertisements between 1890 and 1948, suggesting that the present bottle may be more precisely dated between 1890 and ca. 1917. The transfer-printed whiteware was more popular somewhat earlier (ca. 1830-1860), but could easily have been in use later in the nineteenth century. The Rockingham stoneware achieved its greatest popularity between 1830 and 1900. In general, the artifacts from this area suggest a late-nineteenth- to early-twentieth-century occupation.

Area 3 produced an assemblage similar to that from Area 2, with a few exceptions. No transfer-printed sherds were recovered from Area 3, but one sherd of blue, shell-edge whiteware was present. In addition, a sherd of plain whiteware contained a maker's mark of the firm of J. & G. Meakin Ltd. of Hanley, England, which was in use after 1890 (Godden 1964:427). The sherd of stoneware with bristol glaze on both its interior and exterior also probably post-dates 1890 (Greer 1981:241, 264). Glass artifacts from this area included a base of a mold-made bottle embossed "Red Raven" and a base of a clear machine-made bottle with an embossed mark of the Owens-Illinois Glass Company in use in either 1934 or 1937 (Toulouse 1971:403). Metal artifacts included three modern machine-cut nails, which were first produced in the 1840s, and two wire nails, which were not in widespread use until the 1880s. Also present was a buffalo nickel, a coin minted between 1913 and 1938. Considered as a whole, the collection suggests an occupation dating to the same period as that in Area 2.

Site 16 AN 48 is interpreted as a series of thin sheet middens associated with houses that were located in this area during the late-nineteenth and early-twentieth centuries (see Figure 24). The blue shell-edge and transfer-printed whitewares probably represent heirlooms, but the bottle that was made in 1934 or 1937 must have been introduced after the area was abandoned.

16 AN 49

This site is located ca. 30 m upstream from 16 AN 48, and like the two previous sites, consists of thin zones of cultural material eroding from the bankline ca. 2.0 to 2.5 m below the top bank. The occupational zone could be identified in three areas which extend a total of 100 m along the bankline (Figure 31). The stratigraphic sequence is illustrated by a profile drawn in Area 3 (Figure 32). As at 16 AN 48, the upper 170 cm of deposits consisted of thickly bedded sand strata separated by faint humus zones. Beneath that were a highly oxidized silty clay and a silt loam which capped the cultural deposits. In this case two layers could be identified within the latter: an upper lens of gravel and a lower deposit of artifacts, oyster shells, and coal slag. The gravel lens probably represents road fill which was spread across the existing sheet midden.

Three auger borings were excavated on the top bank in the vicinity of this site. One was placed ca. 2 m back from the bankline in Area 2 and a second was located a

Table 10. Material Recovered from 16 AN 48.

	AREA 1	AREA 2	AREA 3
CERAMICS			
Refined Earthenware			
Whiteware			
Hollowware			
plain		1	
Saucer			
plain		1	2
Plate			
blue-edged			1
plain		1	2
Flatware			
transfer printed		2	
molded		2	2
plain		1	1
Unidentified			
molded			2
plain		2	
Porcelain			
Figurine			
molded			1
Saucer			
plain			1
Stoneware			
Hollowware			
bristol-slipped, 2 sides			1
unslipped			1
rockingham		1	
GLASS			
Figurine			
milk/blue			1
Canning Jar Lid			
milk			1
Lid			
Pressed			
clear			1
Eyeglass			
clear green (lens)		1	
Drinking Glass			
clear green			1
Bottle			
Cylindrical			
Unid. mfg. tech.			
clear		4	
Mold-made			
brown, "Red Raven"			1
Beveled Rectangular			
Mold-made			
clear blue, "C Damschinsky Liquid Hair Dye"		1	
Case			
Mold-made			
brown		4	
Monarch or Erie Oval			
Machine-made			
clear			1
Unidentified			
milk		1	

Table 10 concluded.

	AREA 1	AREA 2	AREA 3
METAL			
Nail			
modern machine cut			3
wire	1	4	2
square		2	
unidentified		1	4
Iron			
spike	1		
barbed wire	1		
horseshoe		1	
unidentified			3
Alloy			
coin (buffalo nickel, no date)			1
BONE		1	1
COLUMN TOTALS	3	31	34
SITE TOTAL			68

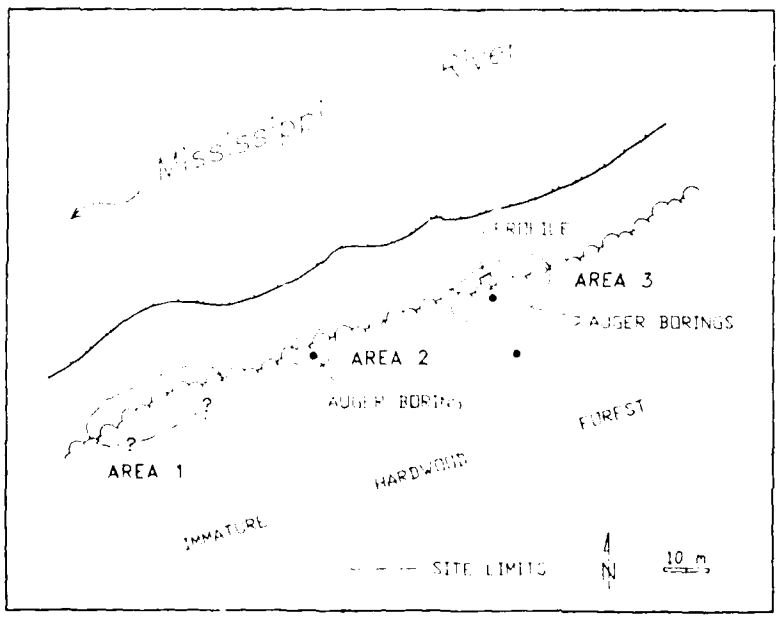


Figure 31. Sketch map of site 16 AN 49.

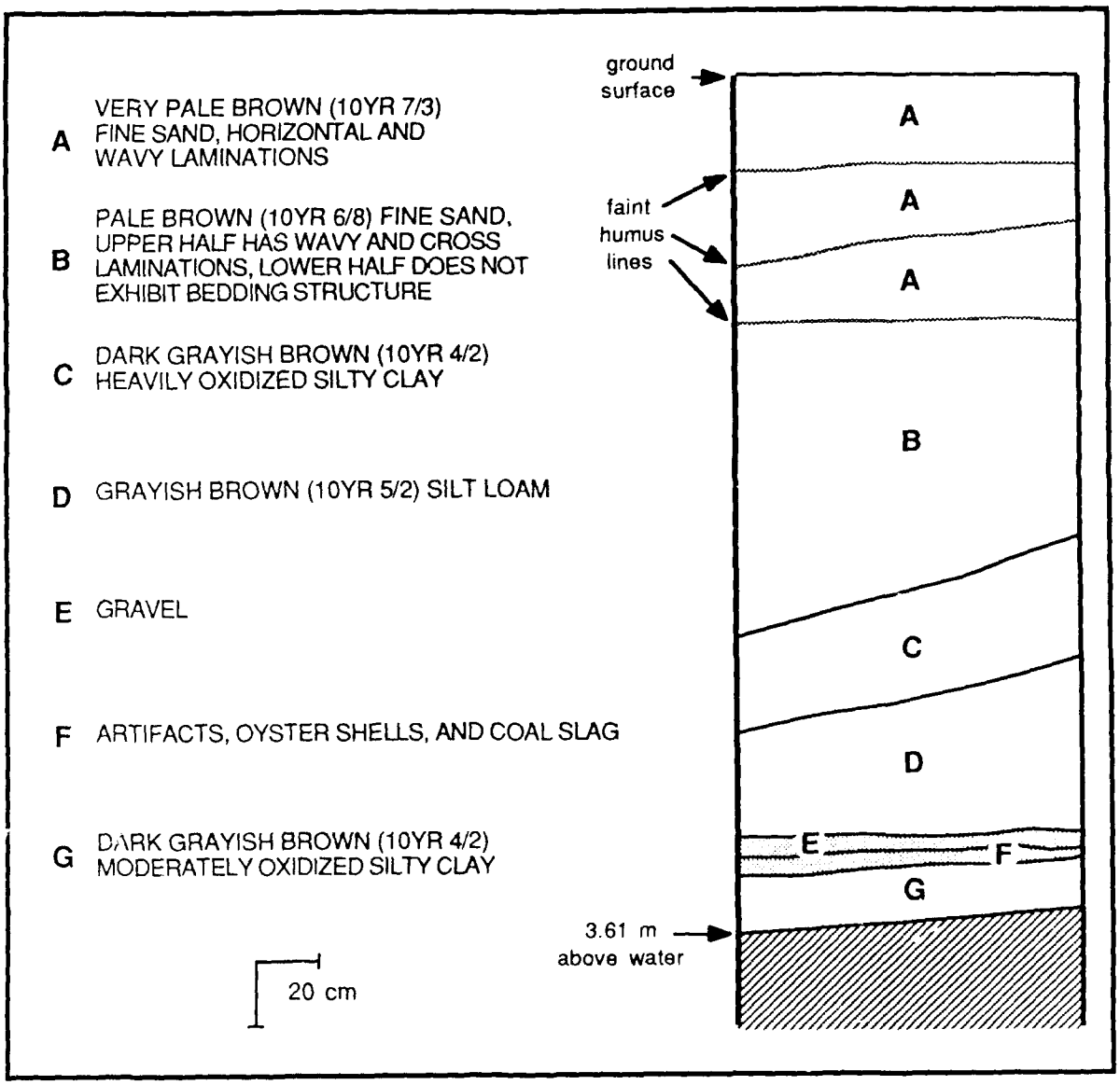


Figure 32. Stratigraphic profile of Area 3 at 16 AN 49.

similar distance from the bank in Area 3. Both of these encountered fragments of brick and oyster shell at the level of the cultural deposit. The third boring was located ca. 15 m back from the bankline in Area 3. No evidence of cultural material was seen in this boring. The results of these borings suggest that it is possible to identify the cultural deposits at these sites if the density of artifacts is sufficient, but the distribution of material in these buried sheet middens may be highly variable.

Table 11 summarizes information on the artifacts recovered from 16 AN 49. As at the previous sites, the great majority of this material was collected from the surface of the lower bankline. Area 1 yielded a small collection of plain whiteware, porcelain and stoneware ceramic sherds, and two pieces of machine-made bottle glass. One of

Table 11. Material Recovered from 16 AN 49.

	AREA 1	AREA 2	AREA 3
CERAMICS			
Refined Earthenware			
Whiteware			
Hollowware			
mold		1	
Plate			
plain	2	1	
Flatware		1	
Unidentified			
plain		1	3
Porcelain			
Hollowware			
plain	1		
Saucer			
plain			1
Stoneware			
Handle			
salt-glazed	1		
Hollowware			
albany-slipped (int.), bristol-slipped (ext.)			2
Kaolin			
Marble (toy)			
handpainted	1		
GLASS			
Lamp			
clear		1	1
Window			
clear green			2
Drinking Glass			
clear green			1
Bottle			
Cylindrical			
Unid. mfg. tech.			
clear			3
clear green		1	1
Machine-made			
clear			1
clear blue, "Cola Hiball"	1		2
clear green, "M & B, D'ville, La."		1	
clear green	1		1
brown			1
Beveled Rectangular			
Machine-made			
clear			1
Unidentified			
clear purple			1
METAL			
Nail			
wire		1	1
square			1
Iron			
pliers			1
Alloy			
welding rod flux			1
BRICK			
fragment		1	
COLUMN TOTALS	7	9	25
SITE TOTAL			41

the pieces of glass was a bottle base embossed "Cola Hiball." Area 2 produced a small quantity of plain whiteware and two bottle fragments, one of them a base of a machine-made bottle embossed "M & B, D'Ville, La." A patent date of 10/3/1916 appears on the side of the base. Area 3 yielded plain whiteware, porcelain, and stoneware sherds, and a variety of glass and metal artifacts. The glass included a complete machine-made bottle of beveled rectangular form which bore an embossed mark of the Diamond Glass Company in use since 1924 (Toulouse 1971:550). Also present was a base of a brown beer bottle with an embossed mark of the Adolphus Busch Glass Manufacturing Company in use from 1904 to 1907 (Toulouse 1971:26). As a whole, the collection suggests an early twentieth-century occupation. Like the two previous sites, 16 AN 49 is interpreted as a series of sheet middens associated with houses that were located in this area during the early-twentieth century.

16 AN 6

This site is located ca. 30 m upstream from 16 AN 49 and consists of another series of thin deposits of cultural material eroding from the bankline ca. 2.0 to 2.5 m below the top bank. Two areas were identified at the site, but these may be arbitrary divisions because they were separated by a recently excavated drainage ditch (Figure 33). The

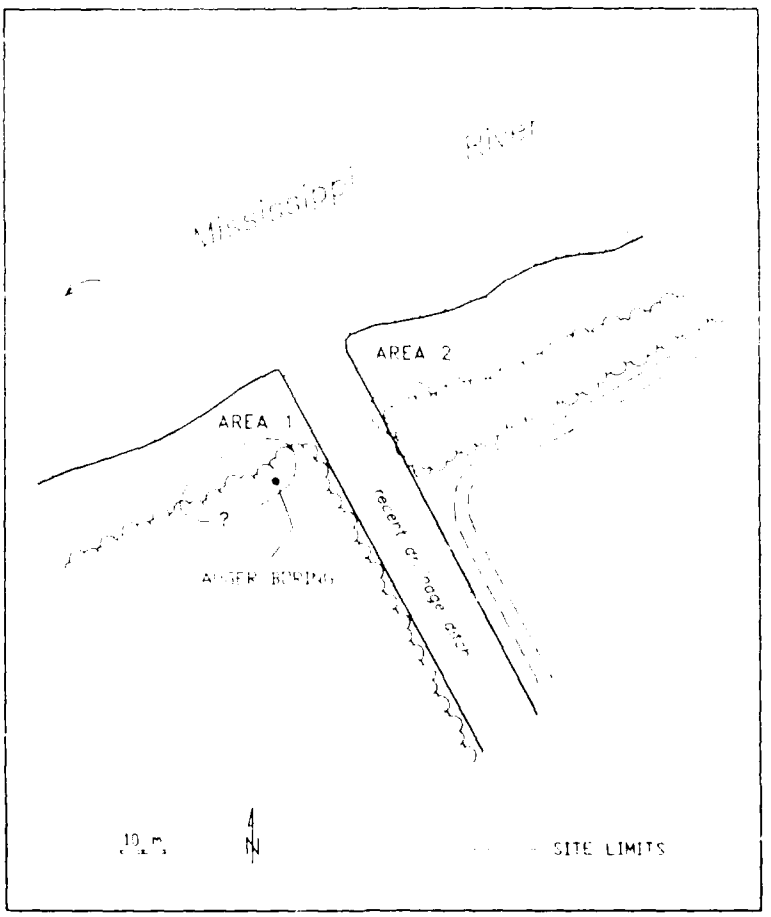


Figure 33. Sketch map of site 16 AN 6.

length of the site along the bankline is 60 m. The stratigraphic sequence here was similar to that at 16 AN 49, with one exception. The sandy crevasse deposits in the upper portion of the profile contained a slab of gray cement-like material which appeared to have been deposited there as a liquid and solidified in place. This material is probably related to recent activities along the river.

An auger boring was excavated on the top bank ca. 5 m back from the bankline in Area 1 at this site. The boring encountered a stratigraphic sequence similar to that exposed along the bankline, but the cultural deposits could not be identified.

Table 12 summarizes information on the artifacts collected from 16 AN 6. Once again, the majority of the material was recovered from the surface of the lower bankline. Area 1 produced a number of sherds of plain whiteware and one sherd with a flow blue decoration popular from 1844 to 1860. Several pieces of porcelain were also present, along with two sherds of stoneware with bristol glazes on their interior and exterior. Glass artifacts included a lamp base with a patent date of 2/18/1918 and several fragments of bottles, at least two of which were machine-made. One of the latter, a clear bottle of beveled rectangular form bore an embossed mark of the Owens Bottle Company in use from 1911 to 1929 (Toulouse 1971:393). Metal artifacts included eight wire nails and two modern, machine-cut nails. Area 2 yielded far fewer ceramics than did Area 1, but it also produced a sizeable number of pieces of window glass. Bottle fragments from this area included two machine-made types, but none contained dateable marks. Metal artifacts included three modern, machine-cut nails; ten wire nails; and several other items, including a horseshoe.

With the exception of the sherd of flow blue, which may have been an heirloom, the collection suggests that the occupation dates to the early-twentieth century. Like the other sites in this area, 16 AN 6 is interpreted as a sheet midden associated with houses that were part of a small community located in this area during the first two decades of this century.

Aben Revetment Area

Location and Description

The Aben Revetment area was located on the right descending bank of the Mississippi River between River Miles 173.1 and 174.0 (Ranges U-17 to U-77), approximately 2.5 km below Donaldsonville, in Ascension Parish, Louisiana (Figure 34). The area to be examined was 6060 ft (1847 m) long and extended to the riverside toe of the modern levee, a distance that averaged about 500 ft (152.4 m).

The subsurface deposits within the project area consist of backswamp clays overlain by 4.5 to 6.0 m of natural levee (Saucier 1969). Observations made during the fieldwork indicate that in places, 1.5 to 2.0 m of coarse overbank deposits have accumulated on top of the natural levee deposits during the last 100 years. Examination of large-scale maps of this area indicates that bankline erosion has been variable here. The upstream and downstream ends of the project area have retreated approximately 20 m and 80 m, respectively, since the 1850s. However, in that same period the central portion of the area appears to have prograded over 160 m. Field maps prepared during 1850 and 1851 for Humphreys and Abbot's (1876) study show the bankline along the riverside toe of the modern levee. By the 1890s it had apparently built out beyond the present bankline in places, and since that time it has retreated to its present position.

Currently, the riverbank in the upstream and downstream ends of the project area

Table 12. Material Recovered from 16 AN 6.

	AREA 1	AREA 2
CERAMICS		
Refined Earthenware		
Whiteware		
Chamber pot lid		
molded	1	
Hollowware		
plain	4	
Plate		
plain	3	
Flatware		
stenciled	1	
glazed (green)	1	
flow blue	1	
plain	6	
Unidentified		
molded	3	
plain	8	
Porcelain		
Bowl		
plain	1	
Flatware		
plain	1	
Unidentified		
molded	1	
plain	2	
Stoneware		
Hollowware		
bristol-slipped 2 sides, painted (ext.)	2	
albany-slipped (int.), bristol-slipped (ext.)		4
GLASS		
Lamp		
clear	1	
Window		
clear blue		4
clear green		13
Button		
milk	1	
Bowl		
Pressed		
clear		1
Drinking Glass		
Pressed		
clear	1	
Bottle		
Cylindrical		
Unid. mfg. tech.		
clear		3
clear green	1	
clear purple	1	2
olive	1	
brown	1	
Machine-made		
clear blue	1	
clear green, "__ Boy"		1
Oval		
Unid. mfg. tech.		
clear purple	1	
Machine-made		
clear		1
Beveled Rectangular		
Machine-made		
clear	1	
French Square		
Unid. mfg. tech.		
clear green	2	
brown	1	
Unidentified		
clear	1	4
clear blue	1	
milk/blue		1

Table 12 concluded.

	AREA 1	AREA 2
METAL		
Nail		
modern machine cut	2	3
machine cut	1	
wire	8	10
Spike		
square		2
Iron		
bolt		1
strap	1	
barbed wire	2	
horseshoe		1
unidentified		4
Brass		
buckle		1
comb		1
BRICK		
fragment	1	
UNIDENTIFIED	5	
COLUMN TOTALS	70	57
SITE TOTAL		127

exhibits a step-like series of terraces caused by erosion of varying river stages. Between 5.0 and 6.0 m of this bankline were exposed at the time of the fieldwork because of the extremely low stage of the river. The central portion of the project area has been significantly altered by construction of a series of elevated conveyor belts and walkways that lead from the chemical plants of C. F. Industries and Triad, Inc., to loading docks located in the river. Extensive borrow pits formerly located in this area have been filled, the area has been graded, and the bankline covered with riprap. This area is now covered with grass, but most of the remainder of the project area supports a bottomland hardwood forest. Two modern trash dumps are also present within the area, a small one in the western portion of Section 11 and a large one in Section 7.

History of Land Ownership and Use

The earliest records of land ownership within the project area are Spanish land grants to Charles Dugas and Pierre Avrieux (or Arrieux). Dugas was a member of one of the first groups of Acadian exiles who settled along the river in the parishes of St. James and Ascension in 1765. He appears in the 1766 Census of Cabaanoce as the 16-year-old nephew of Francois Dugas (Bourgeois 1976:165). His possessions at that time consisted of a gun and the 5 arpents of land that make up Section 14 within the project area. Nine years later he received title to the land in a grant from Spanish Governor Unzaga (Lowerie and Franklin 1834:272). Arrieux may also have been an Acadian exile, but this is less certain. He was granted the adjoining land in Section 11, which had a front of 6 arpents, in the same year as Dugas. There is little information on their activities during this period, but both men probably established small farms on the front of their land and raised cotton, corn, and hogs.

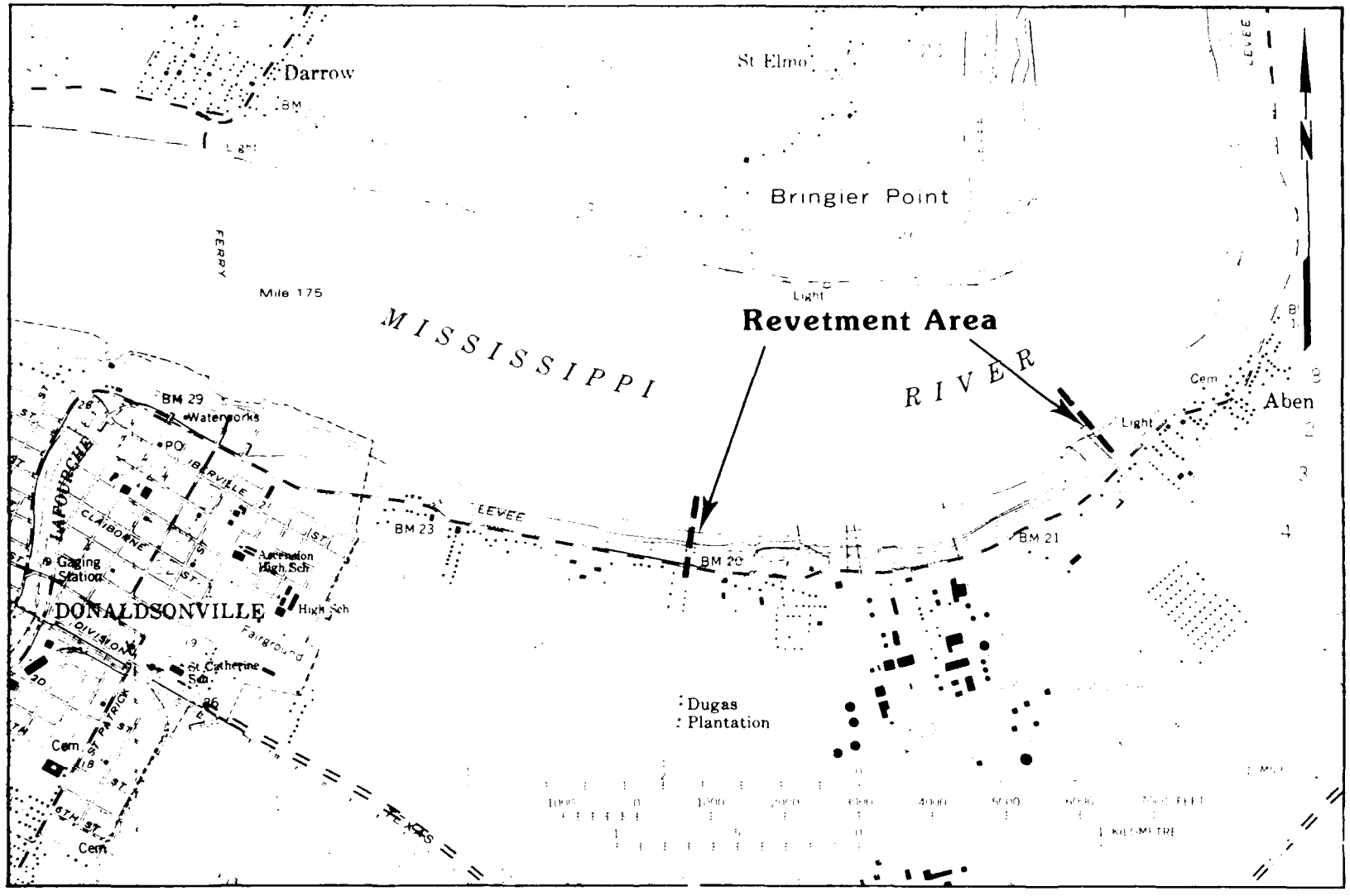


Figure 34. Location of the Aben Revetment area (base map is U.S.G.S. Donaldsonville 7 1/2' Quadrangle, 1981).

Much of the remainder of the project area (Section 10) was patented to Louis Mollere on the basis of occupancy prior to 1803 (Lowerie and Franklin 1834:282). Mollere, a native of Montreal, Canada, moved to Louisiana with his family ca. 1775 (Marchand 1978). His father purchased the land comprising Section 10 in a series of transactions during the late 1770s and 1780s. An inventory made in 1798 describes their home as "a house on ground, 20 ft by 15 ft, gallery front and rear (Marchand 1943:91). Louis inherited the property in 1800 from his mother. The size of Mollere's property, 18 arpents front, suggests that he was operating a sugar plantation on the tract from a relatively early date. The 1820 census provides some support for this assertion, for in that year he owned 35 slaves, 26 of whom were involved in agriculture (U.S. Bureau of Census 1820).

Mollere died in 1821 and his large landholding became the property of his wife, Anne Poulonne, and his children. In 1821 and 1822 they sold two small tracts at the downstream end of the property to Edouard LeBlanc and Edouard Gaudin, but they retained most of the land and in 1828 and 1829 produced sugar crops of 152 hhds and 50 hhds, respectively (Degelos 1892:65). Gaudin also produced sugar crops of 40 and 53 hhds in those years.

The Dugas tract in Section 14 was transferred to the sons of Charles Dugas in 1809, (Ascension Parish Conveyance Office Book 1:141) and the property was owned jointly by them until 1819 when Jerome Dugas purchased the interest of his brother Joseph (Ascension Parish C.O.B. 4:230). Jerome Dugas was apparently cultivating only a small portion of the tract during this time, for the 1820 census indicates that he owned only 5 slaves, 3 of whom were involved in agriculture (U.S. Bureau of Census 1820). By 1830 he had added 18 additional slaves and was producing small sugar crops: 46 hhds in 1828 and 15 hhds in 1829 (Degelos 1892:165).

The Arrieux tract in Section 11 was owned by the son of Pierre Arrieux until 1825, when he sold it to a partnership of Honore Deblieux and Joseph Conrad (Ascension Parish C.O.B. 7:38). It is probable that the younger Arrieux had begun sugar cultivation on the property prior to the sale, for the 1820 census indicates that he owned 17 slaves, all of whom were involved in agriculture (U.S. Bureau of Census 1820). Deblieux and Conrad did not make a sugar crop in 1828, but the following year, after Conrad's purchase of his partner's interest, 48 hhds were produced (Degelos 1892:65). Interestingly, the sugar records also indicate that Deblieux and Conrad had one of only four steam-powered sugar mills in the parish at that time.

By 1840 the project area was a part of four sugar plantations: the Dugas Plantation in Section 14, then owned by Trasimon Landry; the former Arrieux property in Section 11, owned by the widow of Joseph Conrad; the Mollere plantation in the upper portion of Section 10; and in the lower portion of that section a plantation composed of the two tracts sold by the Molleres and then owned by Jean Pierre Viala. The ownership of these properties changed many times; on several occasions plantation names were changed, but the properties remained largely intact well into the twentieth century. Table 13 presents a compilation of the sugar records for these plantations from 1844 to the turn of the century.

Large-scale maps of the project area are available beginning in the 1850s. Figure 35 presents information from an 1850-1851 Humphreys and Abbot map and an 1869 Louisiana Department of Public Works map overlaid on a current base map of the area. Beginning at the west end of the project area, the Dugas Plantation building complex is shown near the boundary of Sections 14 and 11 (due to scale problems, they should

Table 13. Sugar and Rice Production on Plantations in the Aben Revetment Area 1844-1903 (Champomier 1844-1862; Bouchereau 1869-1903).

Year	Owner/Manager	Plantation	(Hhds) Sugar	Rice
1844	Trasimond Landry		332	
	Mrs. J. Connand		350	
	Mrs. Louis Mollere		321	
	J.P. Viala		119	
1845-46	Trasimond Landry		306	
	Widow Connand		235	
	Mrs. L. Mollere		275	
	Edward Leblanc		20	
	P. Viala		119	
1849-50	T. Landry		115	
	Widow J. Connand		262	
	Mrs. L. Molere		365	
	E. Leblanc		22	
	P. Viala		114	
1850-51	T. Landry	Dugas	160	
	Widow Connand		235	
	Mrs. L. Molere		200	
	E. Leblanc		13	
	Pierre Viala		106	
1851-52	T. Landry	Dugas	148	
	Widow J. Connand		204	
	Mrs. L. Molere		240	
	E. Leblanc		14	
	Pierre Viala		100	
1852-53	T. Landry	Dugas	247	
	Widow J. Conand		263	
	Mrs. L. Molere		347	
	E. Leblanc		33	
	Pierre Viala		194	
1853-54	T. Landry	Dugas	437	
	Widow Conand		474	
	Mrs. Molere		595	
	E. Leblanc		56	
	P. Viala		267	
1854-55	T. Landry	Dugas	148	
	Widow J. Conand		204	
	Mrs. Molere		240	
	E. Leblanc		14	
	P. Viala		100	

Table 13 continued.

Year	Owner/Manager	Plantation	(Hhds) Sugar	Rice
1855-56	T. Landry	Dugas	247	
	Widow J. Conand			
	J. A. Ventress		263	
	Mrs. Molere		347	
	E. Leblanc		33	
	P. Viala		194	
1856-57	T. Landry	Dugas	110	
	J. A. Ventress		66	
	Mrs. Molere		47	
	E. Leblanc		9	
	P. Viala		21	
1857-58	T. Landry		125	
	J. A. Ventress		343	
	Wm. Atkinson		140	
	E. Leblanc		132	
	P. Viala		180	
1858-60	T. Landry	Dugas	180	
	J. A. Ventress		170	
	Wm. Atkinson		70	
	E. Leblanc		35	
	Mrs. J. P. Viala		150	
1861-62	J. A. Ventress		310	
	Wm. Atkinson		187	
	E. Leblanc		--	
	P. Viala		270	
1869-70	Jno. S. Wallis	Dugas	Next Year	
	Jacobs Bros.	Stella	154	
	James Teller	River Side	140	
	Mrs. E. Leblanc	—	7	
	Jacobs Bros.	Raccourci	Next Year	
1871-72	John Wallis	Dugas	38	
	Jacobs Bros.	Stella	140	
	James Teller	River Side	198	
	Mrs. Ed Leblanc	—	26	
	Jacobs Bros.	Raccourci	64	
1872-73	John S. Wallis	Dugas	125	
	Jacobs Bros.	Stella	138	
	James Teller	River Side	185	
	Mrs. E. Leblanc	--	11	
	Jacobs Bros.	Raccourci	89	

Table 13 continued.

Year	Owner/Manager	Plantation	(Hhds) Sugar	Rice
1873-74	John S. Wallis	Dugas	100	
	Jacobs Bros.	Stella	200	
	J. Teller	Riverside	250	
	Mrs. E. Leblanc	--	2	
	Jacobs Bros.	Raccourci	135	
1875-76	J. S. Wallis	Dugas	222	
	J. J. Drake & Co.	Stella	340	
	J. Teller	River Side	405	
	Mrs. E. Leblanc	River Side	3	
	Fietel & Joseph	Raccourci	253	
1876-77	J. S. Wallis	Dugas	210	237,444 lbs
	J. J. Drake & Co.	Stella	265	
	J. Teller	River Side	385	
	Fietel & Joseph	Raccourci	268	
1877-78	John S. Wallis	Dugas	115	237,444 lbs
	J. J. Drake & Co.	Stella	180	
	James Teller	River Side	225	
	Fietel & Joseph	Raccourci	160	175,000 lbs
1878-79	John S. Wallis	Dugas	combined with another plantation	
	J. J Drake & Co.	Stella	360	
	James Teller	River Side	600	
	Fietel & Joseph	Raccourci	195	
1879-80	Citizen's Bank	Dugas	combined with another plantation	
	A. Jacob	Stella	225	
	James Teller	River Side	425	
	J. B. Jacob	Raccourci	Next Year	
1880-81	Citizen's Bank	Dugas	combined with another plantation	
	A. Jacob	Stella	300	1,435 bbls
	James Teller	River Side	570	
	J. B. Jacob	Raccourci	312	
1881-82	Lemann, Hanson & Son	Dugas	856 tons of raw cane	3,708 bbls
	A. Jacob	Stella	160	1,800 bbls
	James Teller	River Side	375	

Table 13 continued.

Year	Owner/Manager	Plantation	(Hhds) Sugar	Rice
1882-83	Lemann, Hanson & Lum	Dugas	1238 tons of raw cane	3,708 bbls
	Aaron Jacob	Stella	360	3,800 bbls
	James Teller	River Side	646	840,000 lbs
	J. B. Jacob	Raccourci	235	
1883-84	Lemann, Hanson & Son	Dugas	--	--
	Aaron Jacob	Stella	214	2,600 bbls
	James Teller	River Side	528	740,000 lbs
	J. B. Jacob	Raccourci	170	--
1884-85	Lemann, Hanson & Lum	Dugas	combined with other plantations	
	Aaron Jacob	Stella	356	480,000 lbs
	James Teller	River Side	567	760,000 lbs
	O. Duseau de LaCroix	Raccourci	--	1600 tons
1885-86	B. Lemann & Bro.	Dugas	combined with other plantations	
	Aaron Jacob	Stella	654 tons of cane	8,000 bbls
	James Teller	River Side	746	1,000,000 lbs
	O. Duseau de La Croix	Raccourci	188	
1886-87	Aaron Jacob	Stella	250	335,000 lbs
	James Teller	Riverside	522	700,096 lbs
	Abraham and Wild	Viala	1,400 tons of raw cane	1400 tons
1887-88	Aaron Jacob	Stella	242	3520 bbls
	James Teller	River Side	821	1,100,000 lbs
	Abraham and Wild	Viala	1,100 tons of raw cane	3,520 bbls
1888-89	Aaron Jacob	Stella	337	1,500 bbls
	James Teller	River Side	730	--
	J. B. Abraham & Bro	Viola	--	1,600 bbls
1890-91	A. Jacobs	Stella	868,361 lbs	
	Jas. Teller	River Side	1,065,000 lbs	
	S. B. Burbank	Viola	--	
1891-92	A. Jacobs	Stella	655,581 lbs	
	Jas. Teller	River Side	967,209 lbs	
1892-93	A & S. R. Jacobs	Stella	660,000 lbs	
	James Teller	River Side	954,445 lbs	

Table 13 concluded.

Year	Owner/Manager	Plantation	(Hhds) Sugar	Rice
1893-94	A & S. R. Jacobs	Stella	808,039 lbs	
	James Teller	River Side	1,061,417 lbs	
1894-95	A. & S.R. Jacobs	Stella	1,028,260 lbs	
	James Teller	River Side	1,532,116	
1896-97	B. Lemann & Bro	Dugas	--	
	A. & S. R. Jacobs	Stella	895,000 lbs	
	Walter I. Barton	River Side	1,500,000 lbs	
	Walter I. Barton	Viola	--	
1897-98	B. Lemann & Bro	Dugas	--	
	A. & S. R. Jacobs	Stella	1,200,000 lbs	
	Walter I. Barton	River Side	1,570,000 lbs	
	Walter I. Barton	Viola	--	
1898-99	B. Lemann & Bro	Dugas		
	A. & S.R. Jacobs	Stella		
	Walter I. Barton	River Side	1,755,120 lbs	
	Walter I. Barton	Viola		
1900-01	B. Lemann & Bro	Dugas	--	
	A. & S. R. Jacobs	Stella	--	
	Walter I. Barton	River Side	1,275,000 lbs	
	Walter I. Barton	Viola	--	
1901-02	B. Lemann & Bro	Dugas	--	
	Chas. Tircuit	Stella	--	
	Walter I. Barton	River Side	1,755,120 lbs	
	Walter I. Barton	Viola	--	
1902-03	B. Lemann & Bro	Dugas		
	Waguespack & Schexnaydre	Stella		
	Walter I. Barton	River Side	1,746,775	
	Walter I. Barton	Viola		

lie just inside Section 14). The main house and the two outbuildings closest to it fall under the modern levee. Trasimon Landry, at one time Lieutenant Governor of Louisiana, owned the plantation until 1858 when he lost it at a Sheriff's Sale to the Citizens Bank (C.O.B. 28, Folio 478). The bank then retained it until 1869.

To the east of the Dugas building complex is a group of structures on the Conrads'

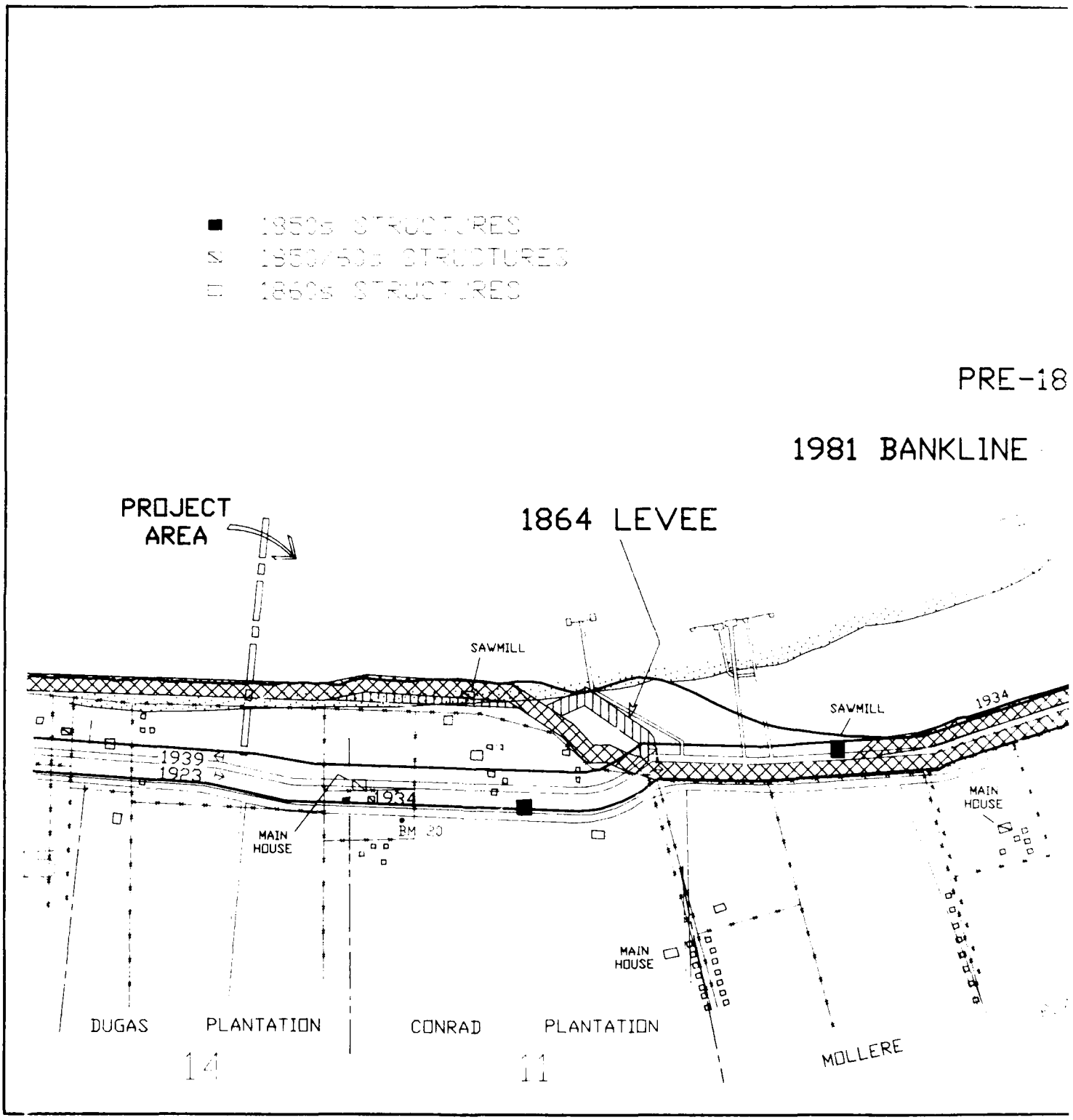
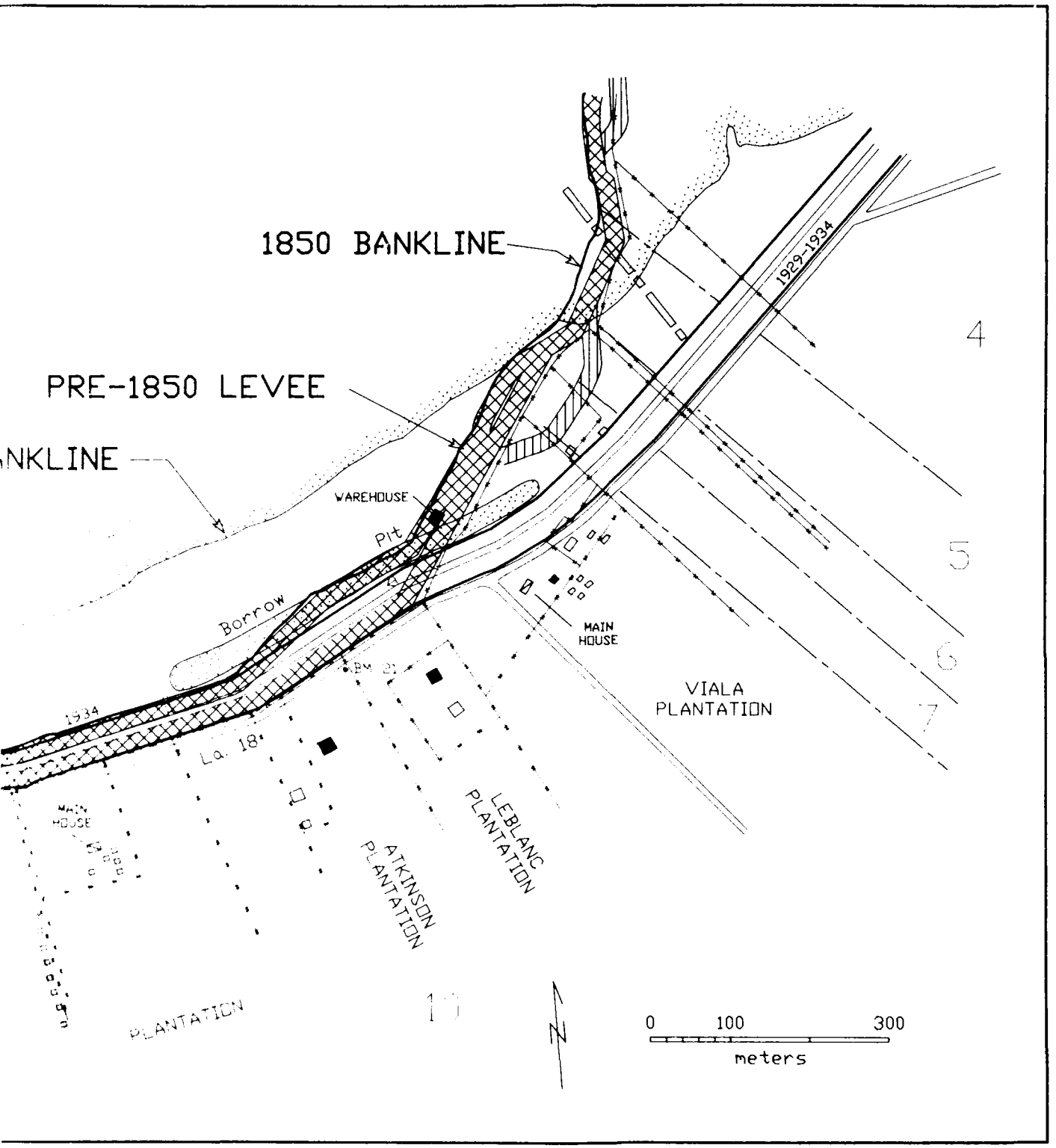


Figure 35. Location of structures in the Aben Revetment area in the 1850s and 1860s (compiled from Hum Public Works map of 1869).



...piled from Humphreys and Abbot map of 1850/51 and Louisiana Department of

plantation. The structure just behind the 1850 levee is identified as an "old sawmill" on the Louisiana Department of Public Works map. During the 1860s the levee was set back slightly or enlarged in this area, and the sawmill appears to have been moved onto it. The main house and slave quarters on the Conrads' plantation are shown well south of the modern levee near the boundary of Sections 11 and 10.

It appears that Joseph Conrad's widow operated the plantation quite successfully during the 1840s and 50s. Sugar production was consistently high and the 1850 census lists the value of the property as $300,000, the highest of any of the plantations within the project area (U.S. Bureau of Census 1850). In 1856 she sold the plantation to James Ventress (Ascension Parish C.O.B. 25:105), who continued to operate the plantation until the Civil War broke out. After the war he lost it to his creditors. Interestingly, the inventory of the plantation conducted at that time mentions an "old saw mill on the levee" (Ascension Parish C.O.B. 28:472).

The Mollere plantation main house and outbuildings are shown on Figure 35 in the central portion of Section 10, south of the modern levee. In 1850 the levee was approximately in its present location in this area. The structure on the riverside toe of the levee is identified as another saw mill on the Louisiana Department of Public Works map.

By the 1850s the Molleres had parceled out two additional tracts located in the eastern portion of their plantation. One was given to Gertrude Mollere Leblanc as part of her inheritance in 1842 (Ascension Parish C.O.B. 18:1). The other was sold to William Atkinson, the husband of Gracieuse Mollere, in 1843 (Ascension Parish C.O.B. 18:63). Buildings on the Atkinson property are shown just east of those on the Mollere plantation in Figure 35, and those of the Leblancs are located further east. The widow Mollere died in 1857, and Atkinson then purchased the remainder of the Mollere plantation from her heirs (Ascension Parish C.O.B. 25:367).

The final plantation complex depicted in Figure 35 is on the Viala plantation, located in the eastern portion of Section 10. The main house and associated outbuildings are located south of the modern levee. The structure situated on the riverside toe of the 1850s levee is probably a warehouse located at the landing. Jean Pierre Viala cultivated a smaller area than his neighbors the Molleres or the Conrads, but he maintained relatively consistent sugar production throughout the 1840s and 1850s (see Table 13). He died in 1856, and in 1862 his widow sold the plantation to her son-in-law, Emile Brun (Ascension Parish C.O.B. 28:26). Brun kept the property only three years before selling it back to his mother-in-law because of "difficulties brought on by the War of Rebellion" (Ascension Parish C.O.B. 28:74).

As in much of southern Louisiana the Civil War brought about major changes in ownership of the plantations within the project area. Dugas Plantation was purchased from the Citizen's Bank in 1869 by John Wallis, who then lost it to the bank again in 1879 (Ascension Parish C.O.B. 31:623). In 1881 it was purchased by a partnership composed of Bernard Lemann (or Lehman), Meyer Lemann, and Richert Hanson (Ascension Parish C.O.B. 32:171). The former Conrad plantation (Section 11) and the Viala plantation (lower Section 10) were both purchased in 1868 by a partnership composed of Jacob Lemann (or Lehman), Aaron Jacobs, and Jonas Jacobs (Ascension Parish C.O.B. 28:472; Ascension Parish C.O.B. 28:635). The Jacobs brothers were former residents of New York who, like many northerners, decided to take advantage of the difficult economic situation in the south. They renamed the Conrads' plantation "Stella" and the Viala's plantation "Raccourci," and the following year bought out their third partner, Jacob Lemann. The former Mollere plantation, owned by William

Atkinson during the early 1860s, was purchased by James Teller at a Sheriff's Sale in 1868 and renamed "Riverside" (Ascension Parish C.O.B. 28:533). In 1876 Teller bought the Leblanc property located below him (Ascension Parish C.O.B. 30:745), and two years he added another 2-arpent tract owned by one of the Mollere heirs (Ascension Parish C.O.B. 31:288), bringing his total frontage to 14 arpents.

Sugar production on most of the plantations within the project area declined significantly during the post-war years (see Table 13). By the mid-1870s it had begun to increase again, but remained below pre-war levels on all but Riverside Plantation. Because of the labor problems of the period, the costs associated with sugar production, and the need to diversify their products, planters in the river parishes began cultivating rice during this time. The first plantation in the project area to plant rice was Dugas, where in the season of 1876-77 John Wallis produced a crop of 237,444 lbs of rough rice. No further production occurred until 1880-81 when Aaron Jacobs produced 1435 barrels of rice on Stella Plantation. The following year Dugas again produced a crop under the Lemanns, and the next year Teller began rice cultivation at Riverside. Interestingly, most of the plantations continued to produce substantial quantities of sugar during this time, suggesting that the switch to rice was due more to a desire to diversify than an inability to bear the costs of sugar cultivation. Rice production continued within the project area through the 1880s and then halted completely by 1890.

Figure 36 depicts the location of structures in the vicinity of the project area during the 1880s and 1890s. Note that the bankline in the central portion of the project area had prograded a considerable distance by 1894. Most of the levees present in the early 1880s were those built during the 1860s or earlier; however, by the 1890s small setbacks had taken place both at the eastern and western ends of the area.

Beginning at the west end of the project area, a number of structures were present on Dugas Plantation during the early 1880s south and west of the project boundaries. By the 1890s many of these structures were gone. During that period the Lehman brothers owned both Dugas and its upstream neighbor, Perseverence Plantation. Sugar cane produced on the two properties was combined, and undoubtedly they were consolidating other aspects of their operation as well.

East of Dugas Plantation the majority of the buildings on Stella Plantation were located south of the project area, but five structures fell within it. The structure located in the northeast portion of Section 11 is identified as a saw mill on a Louisiana Department of Public Works map. Interestingly, a levee had been built out to encompass this area in 1864, but at that time no building was shown within it (see Figure 35). Since 1868, inventory of the plantation mentions only the old sawmill located west of this one, it is probable that this "new" sawmill was not built until after that time. It appears on an 1884 plan of the plantation shown in Figure 37. By that time the protecting levee had apparently eroded away, and the sawmill was left standing on the batture. The 1894 Mississippi River Commission map indicates that it was still there ten years later.

On Riverside Plantation, the location of the antebellum building complex in the upper half of Section 10 remained in use, but a new group of structures had developed east of there on the old Atkinson and Leblanc properties. Only two buildings were present in the project area. One was the sawmill, which was still located on the riverside toe of the levee. The other was a large rectangular building situated near the bankline. This was probably a warehouse located at the plantation's landing.

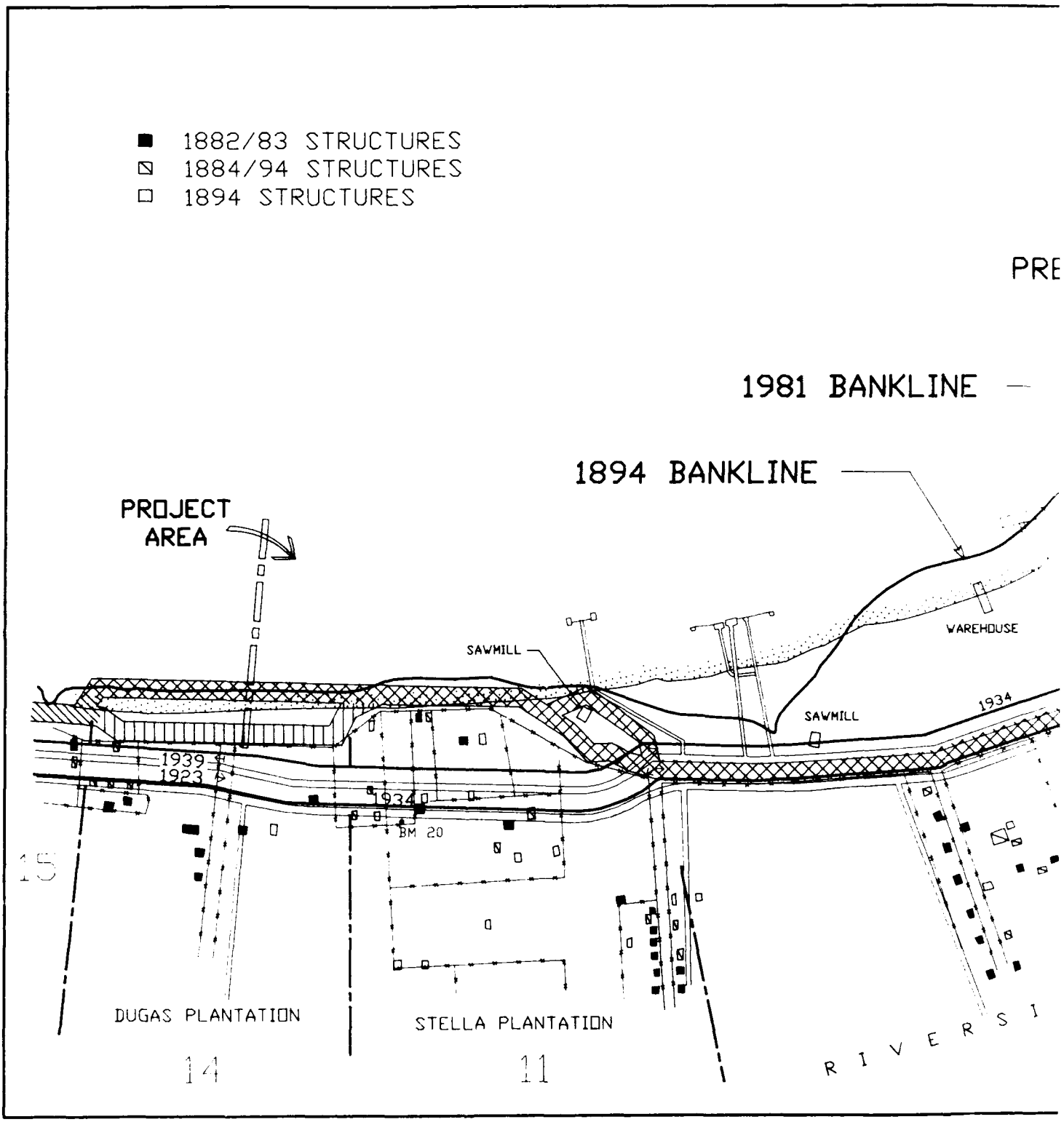
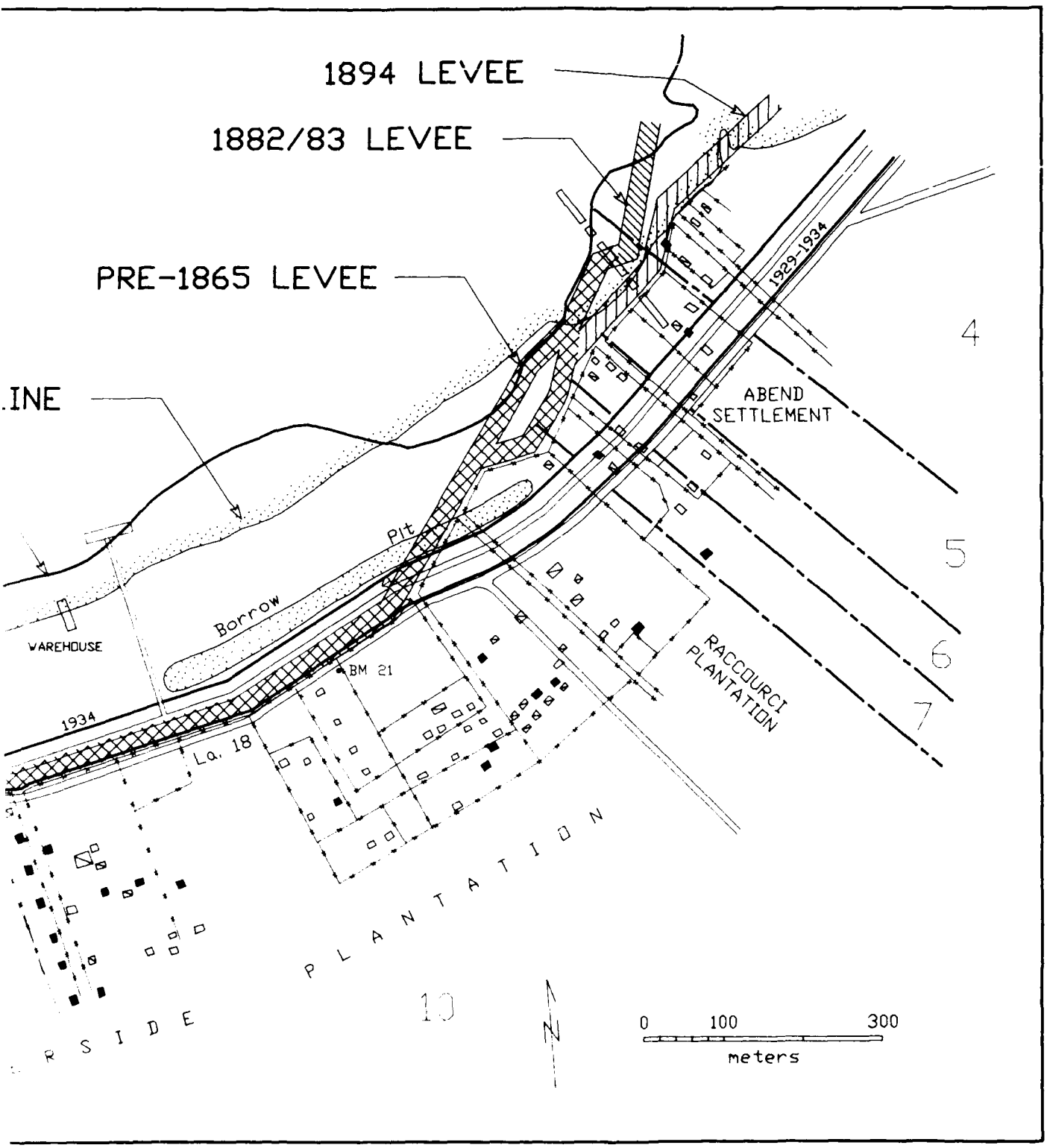


Figure 36. Location of structures in the Aben Revetment area in the 1880s and 1890s (compiled from Department of Public Works maps).



ompiled from Mississippi River Commission maps of 1882/83 and 1894 and

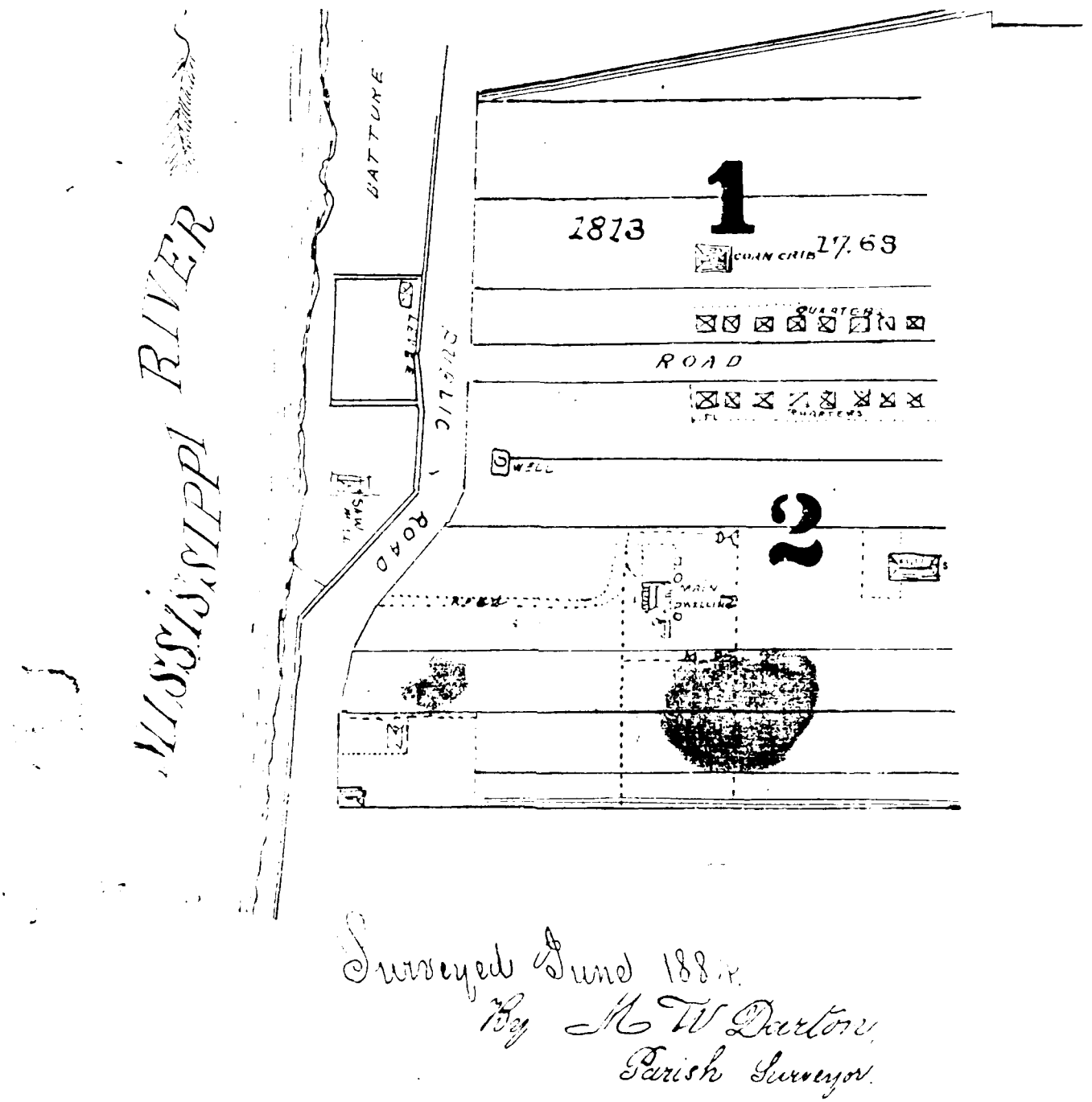


Figure 37. Portion of a plan of Stella Plantation in 1884 (Darton 1884).

Figure 36 indicates that the building complex on Raccourci (formerly Viala) Plantation in lower Section 10 had grown since the 1860s, but the warehouse formerly located on the levee was gone by the 1880s because the bankline had built out beyond this point. One structure on the plantation was located within the project area in Section 10, and four other structures in Section 6 may have been associated with Raccourci or with a small farm located in this area. The Jacobs family sold the plantation in 1884, and after that it was again known as Viala. In 1891 James Teller purchased it and made it a part of his vast Riverside Plantation (Ascension Parish C.O.B. 35:9). It remained a part of Riverside Plantation until 1908, after which it was again known as Viala.

East of Raccourci/Viala Plantation in Sections 4 and 5 a small community developed after the Civil War. Its residents were largely former slaves from the nearby plantations. Because it was located at a bend in the river, it came to be known as "A Bend Settlement."

Major levee setbacks took place in the upstream and downstream ends of the project area in 1915. Figure 38 shows the location of those setbacks and of the structures near the project area at that time. No buildings were located in this area on Dugas Planation, probably because its operation had been combined with the adjoining plantation. The Lemanns continued to own Dugas Plantation until 1917, after which time it passed the hands of several corporations.

On Stella Plantation the sawmill and other structures located within the project area during the 1880s and 1890s had all been moved back or demolished by 1915. The closest remaining buildings were situated in the alignment of the present levee, which in this area was constructed in 1934. The Jacobs family had sold the plantation in 1903 (Ascension Parish C.O.B. 44:260), and in 1915 it was owned by Alidore Waguespack. It changed hands several times late in the twentieth century before being purchased by C.F. Industries in the 1970s as the location for a chemical plant.

Further east on Riverside Plantation the sawmill and warehouse that had been located within the project area during the 1880s and 1890s were both gone. The main building complex was still located in its antebellum location, but there, too, the numer of structures had been significantly reduced. A new main house had been built ca. 1899 in roughly the same location as the previous one.

James Teller owned Riverside Plantation until his death in 1896. It was then the property of Walter Barton until 1908, and after that it was owned by C. H. Landry until 1918. In that year it was purchased by A. C. Simoneaux and two partners, G. A. Rybiskie and Robert Leblanc (Ascension Parish C.O.B. 60:360). Simoneaux bought out his partners in 1932 and the plantation remained in the Simoneaux family until 1970 when it was sold to Triad Chemical Company, the present owners. The Riverside Plantation main house now serves as the company's headquarters (Figure 39).

East of Riverside on Viala Plantation the 1915 levee setback resulted in the removal of all of the remaining structures within the project area. A house was located at the downstream end of the plantation at that time, but its location fell within the alignment of the present levee. The Viala main house continued to stand south of the current levee until a few years ago when it was moved to the foot of the Sunshine Bridge where it now houses Lafitte's Landing Restaurant (Figure 40).

The A Bend Settlement located downstream from Viala Plantation was continuing to grow during this period. Not only did the number of houses increase, but the

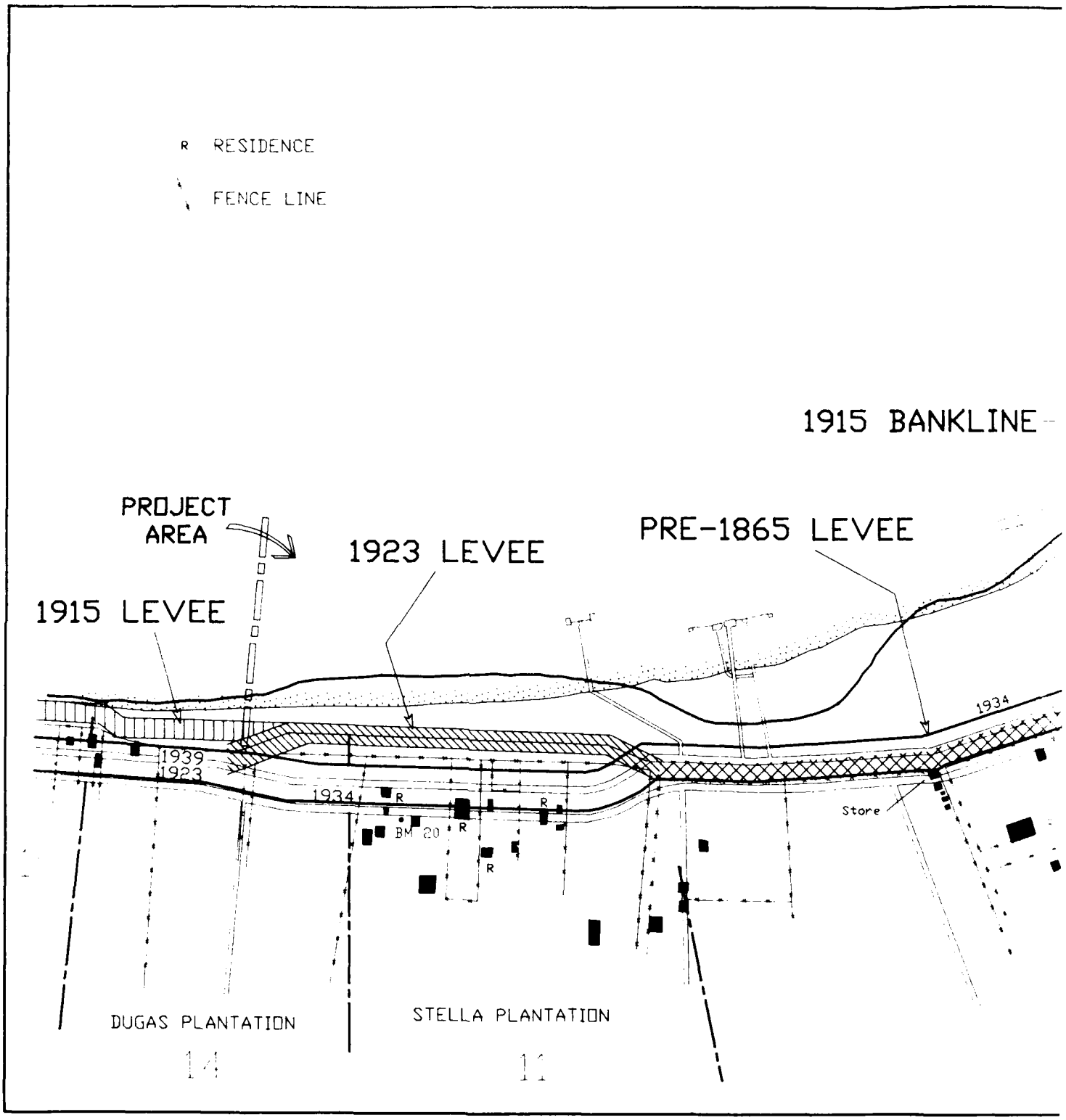
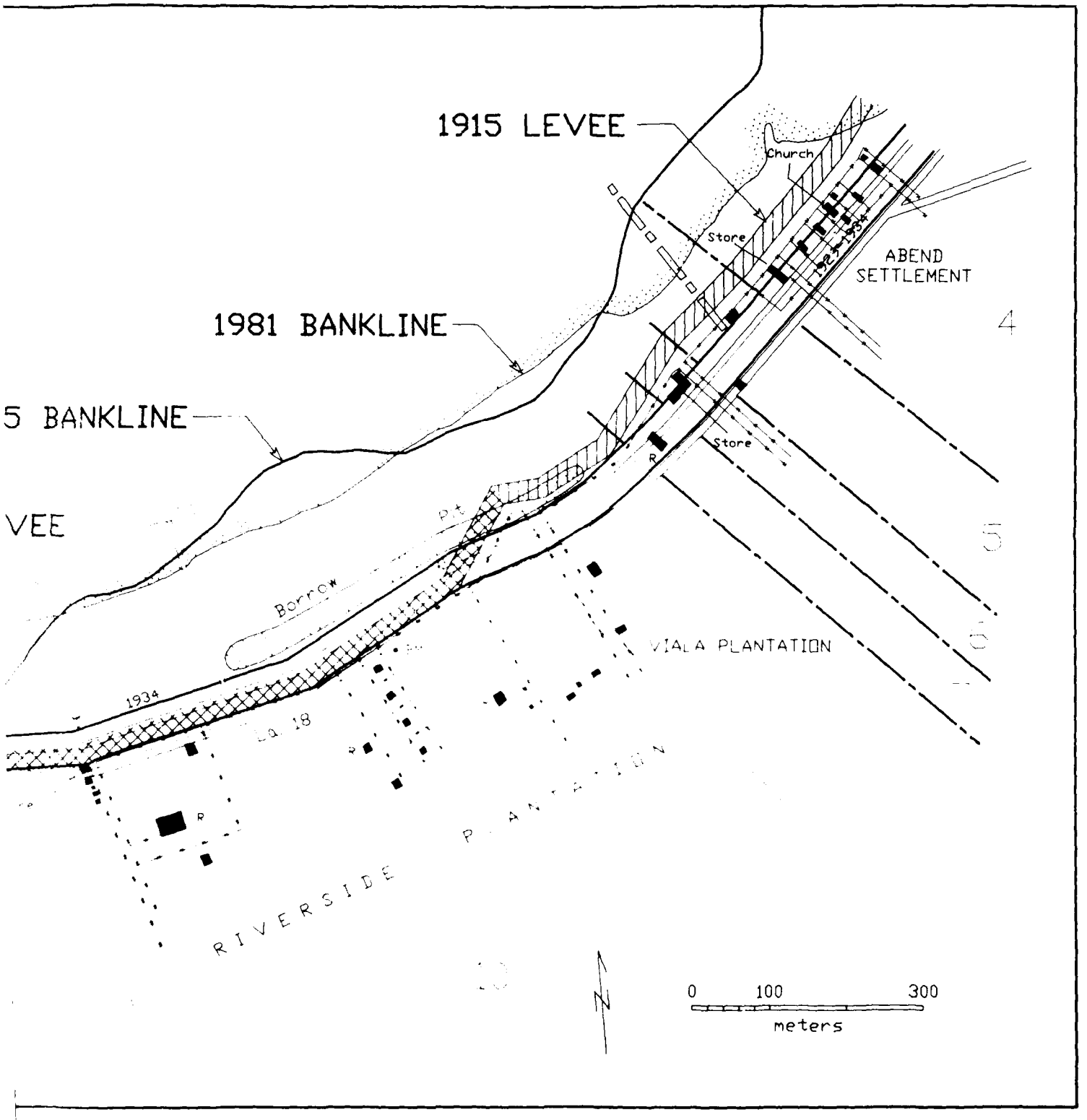


Figure 38. Location of structures in the Aben Revetment area ca. 1915 (based on Louisiana Department of



...partment of Public Works maps of 1915).

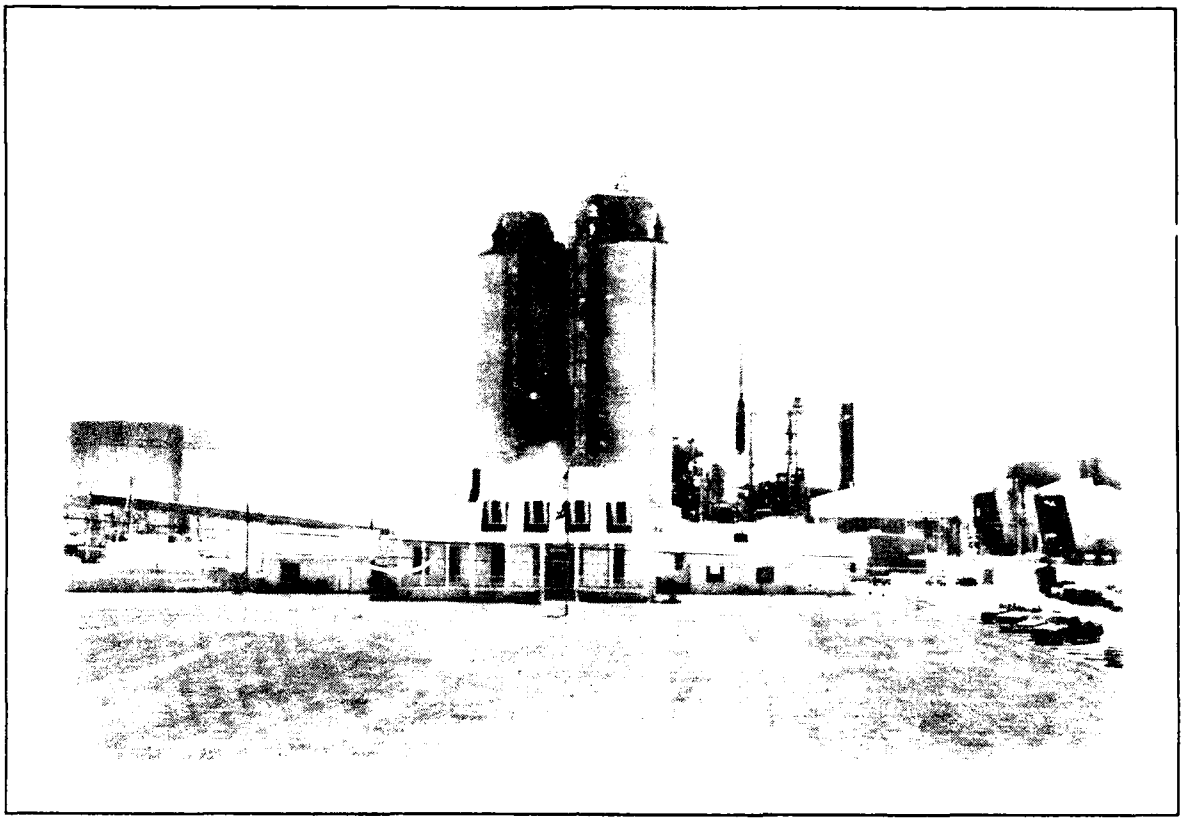


Figure 39. View to south of former Riverside Plantation main house.

community now contained four stores and two churches (some located beyond the limits of Figure 37).

Results of the Fieldwork

The intensive survey of the Aben Revetment area located three historic archeological sites (Figure 41). Two of the sites, 16 AN 42 and 16 AN 43, were situated along the riverbank in the western portion of the project area, while the third site, 16 AN 44, was located on the top bank a short distance back from the riverbank.

16 AN 42

This site is located along the riverbank at the west end of the project area and includes five discrete areas in which cultural materials occurred (Figure 42). Area 1 consisted of a scatter of bricks and few other artifacts lying along the lower bankline just beyond the project area. The material began at the project area boundary and extended 75 m west from there. Despite careful examination of the upper bankline, no source deposit for these artifacts could be located. The collection from this area is relatively small, but it contains evidence of two periods of occupation (Table 14). The earlier of the two dates to the late-eighteenth or early-nineteenth century and includes a sherd of tin-enameled earthenware (probably faience), two sherds of green shell-edged pearlware, two olive glass bottle necks with string lips, and an olive amber

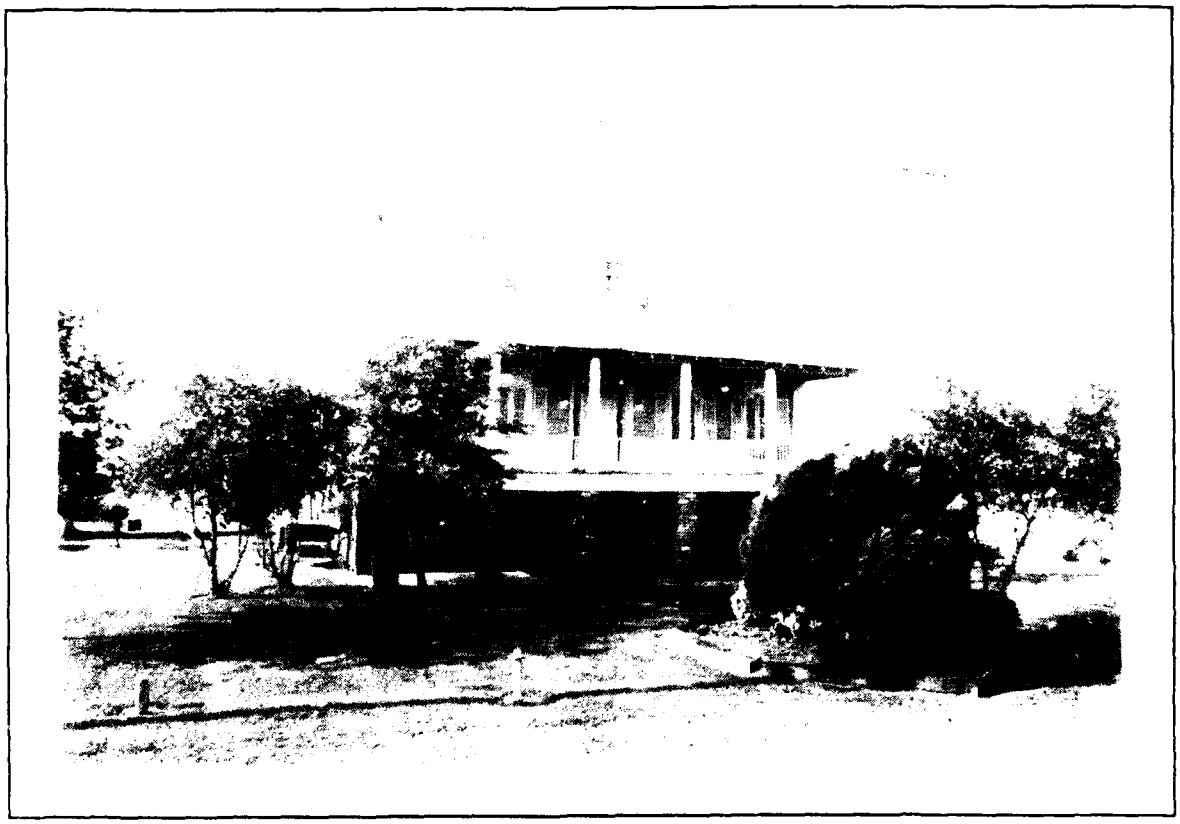


Figure 40. View to south of former Viala Plantation main house.

bottle base. The other occupation dates to the late-nineteenth century and includes three sherds of plain whiteware, three sherds of stoneware, bottle fragments of beveled rectangular and panel forms, and a modern machine cut nail. The earlier component is probably associated with Charles Dugas' ownership of the property, while the later component could be related to either Wallis' or the Lehman's ownership of the plantation. All of the material has now been redeposited on the lower bankline, and intact remains are apparently no longer present.

Area 2 at 16 AN 42 consisted of a metal pipe running perpendicular to the river about 55 m east of the project area boundary. It was 18 in (45.7 cm) in diameter and constructed of sheets of iron riveted together. Approximately 5 m of the pipe were exposed at the time of the survey, but it undoubtedly continued both toward the river and toward the levee. The pipe is interpreted as an irrigation structure dating to the late-nineteenth or early-twentieth centuries. It may be related to the period of rice cultivation on Dugas Plantation during the 1880s, but as discussed below it is of a later design than some of the irrigation structures in use during that time.

Area 3 consisted of a zone of brick rubble and an intact concrete pier or foundation footing eroding from the bankline between 80 and 126 m from the project area boundary. The zone of brick rubble was exposed ca. 3.0 m below top bank at the base of the lower of two erosional terraces present in this area (Figure 43). It could be traced intermittently for 46 m along the bankline. The concrete foundation occurred

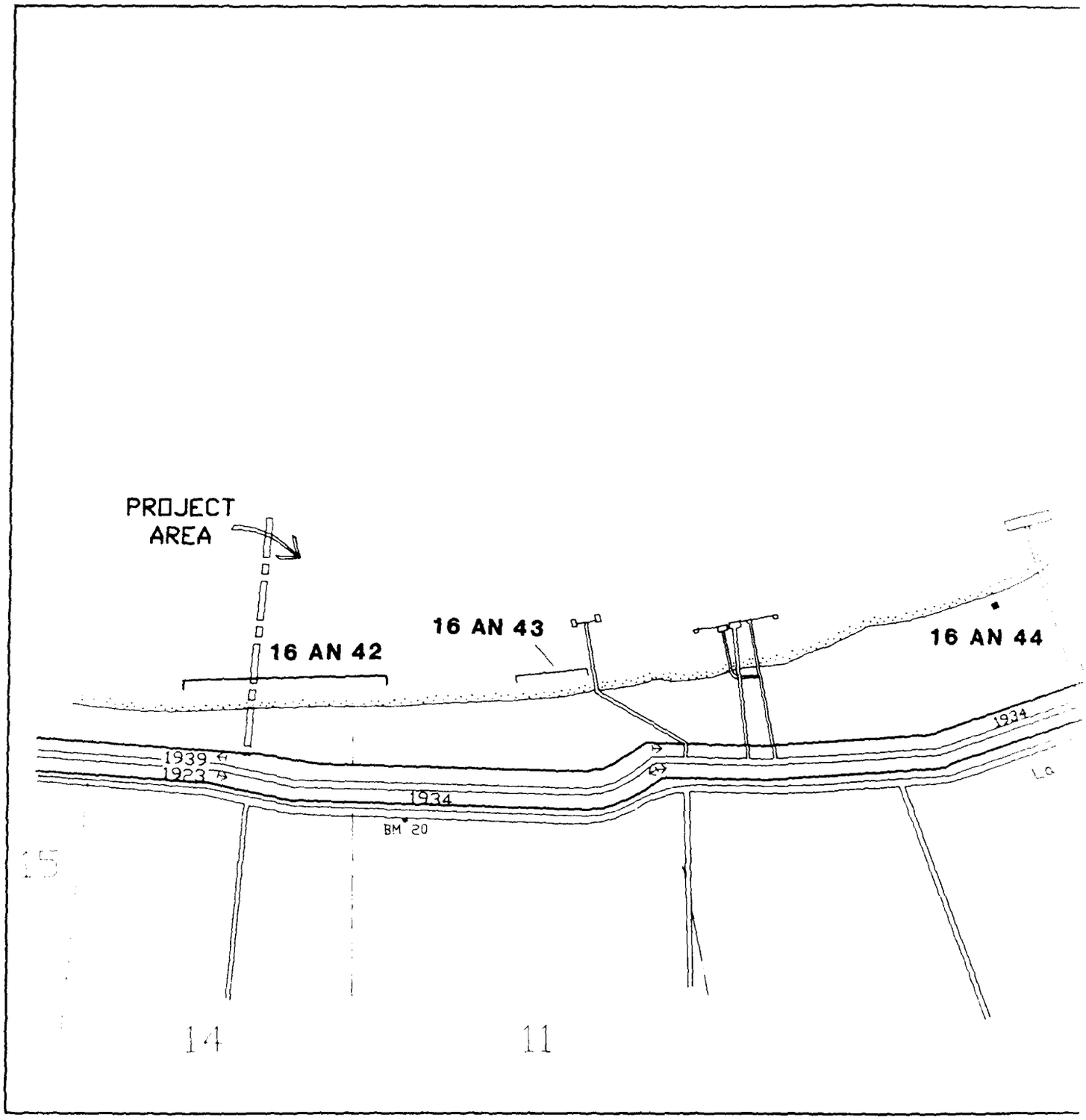
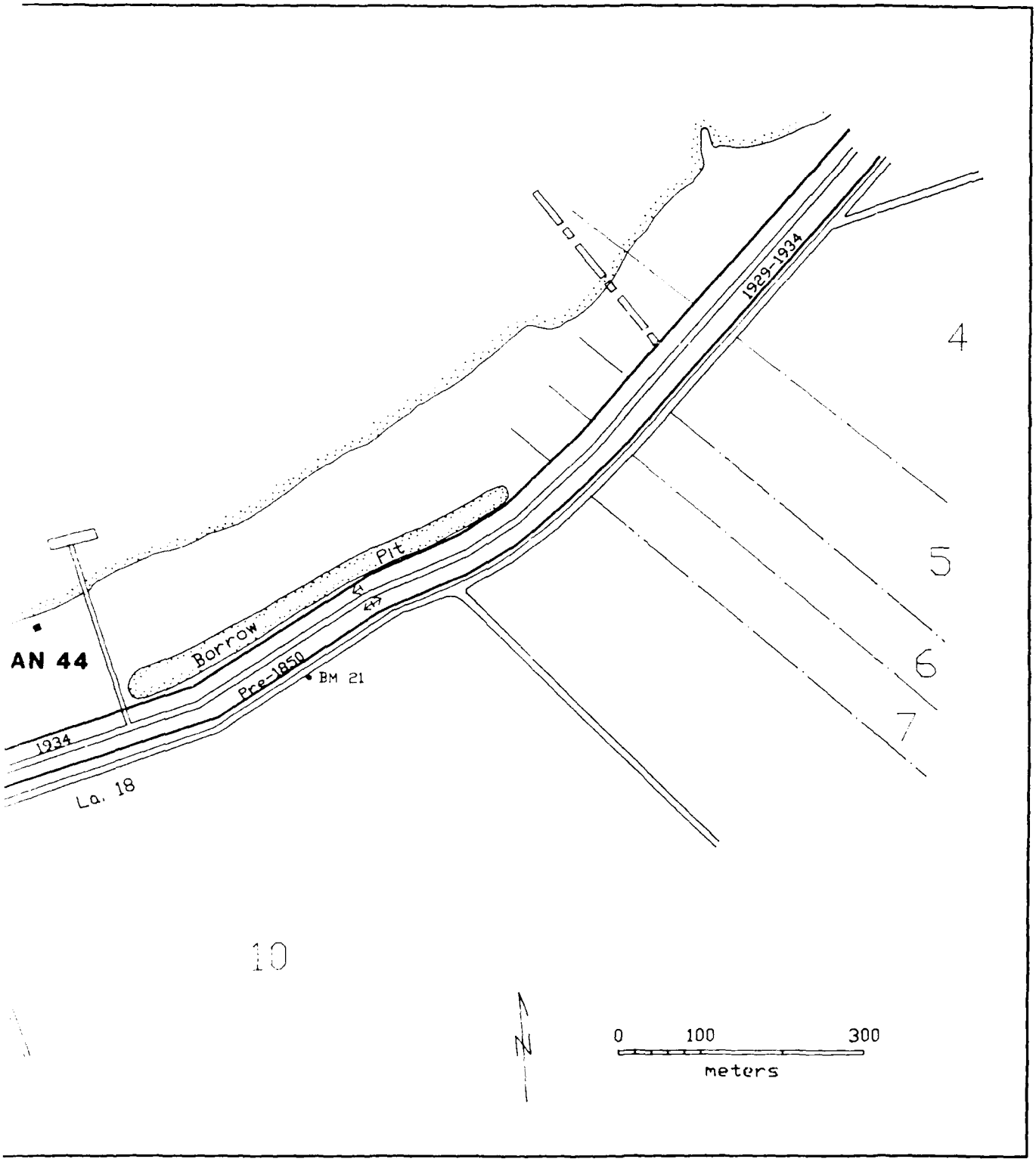


Figure 41. Plan of the Aben Revetment area in 1981 showing site locations.


1929-1934
4
5
6
7
Pit
Borrow
Pre-1850
BM 21
1934
La. 18
AN 44
10
N
0
100
300
meters

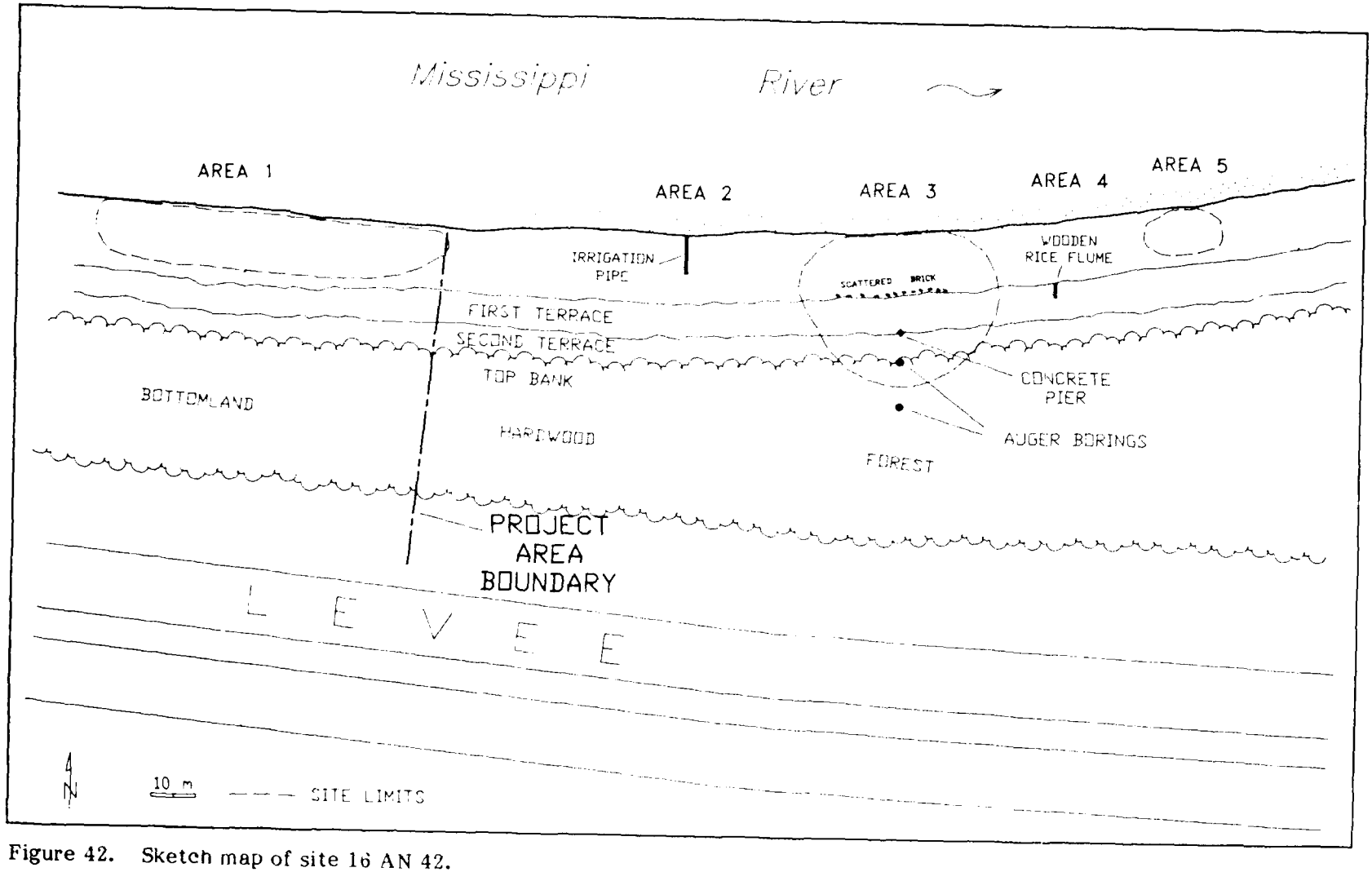


Figure 42. Sketch map of site 16 AN 42.

Table 14. Material Recovered from 16 AN 42.

	AREA 1	AREA 3	AREA 4	AREA 5
CERAMICS				
Refined Earthenware				
Pearlware				
Plate				
green-edged	2	1		1
Unidentified				
plain		1		
Whiteware				
Flatware				
flow blue				1
plain	3		2	
Unidentified				
plain		1		
Coarse Earthenware				
Buffware				
Unidentified				
tin-enameled	1			
Stoneware				
Jug				
albany-slipped (int.), bristol-slipped (ext.)	3			
Hollowware				
albany-slipped 2 sides			1	
GLASS				
Bottle				
Cylindrical				
Free blown				
String lip				
olive	2			
Base				
olive amber	1			
Unid. mfg. tech				
clear		1		1
clear green	1			
olive	1		1	
olive amber	2			
Machine-made				
clear green	1			
Beveled Rectangular				
Unid. mfg. tech				
clear blue	1			
Machine-made				
clear				1
Panel				
Unid. mfg. tech				
clear green				1
brown	1			
Unidentified				
clear				1
clear green	1			
clear purple	1			
METAL				
Nail				
modern machine cut	1		6	
BONE				
Cow				
tooth	1			
COLUMN TOTALS	23	4	10	6
SITE TOTAL				43

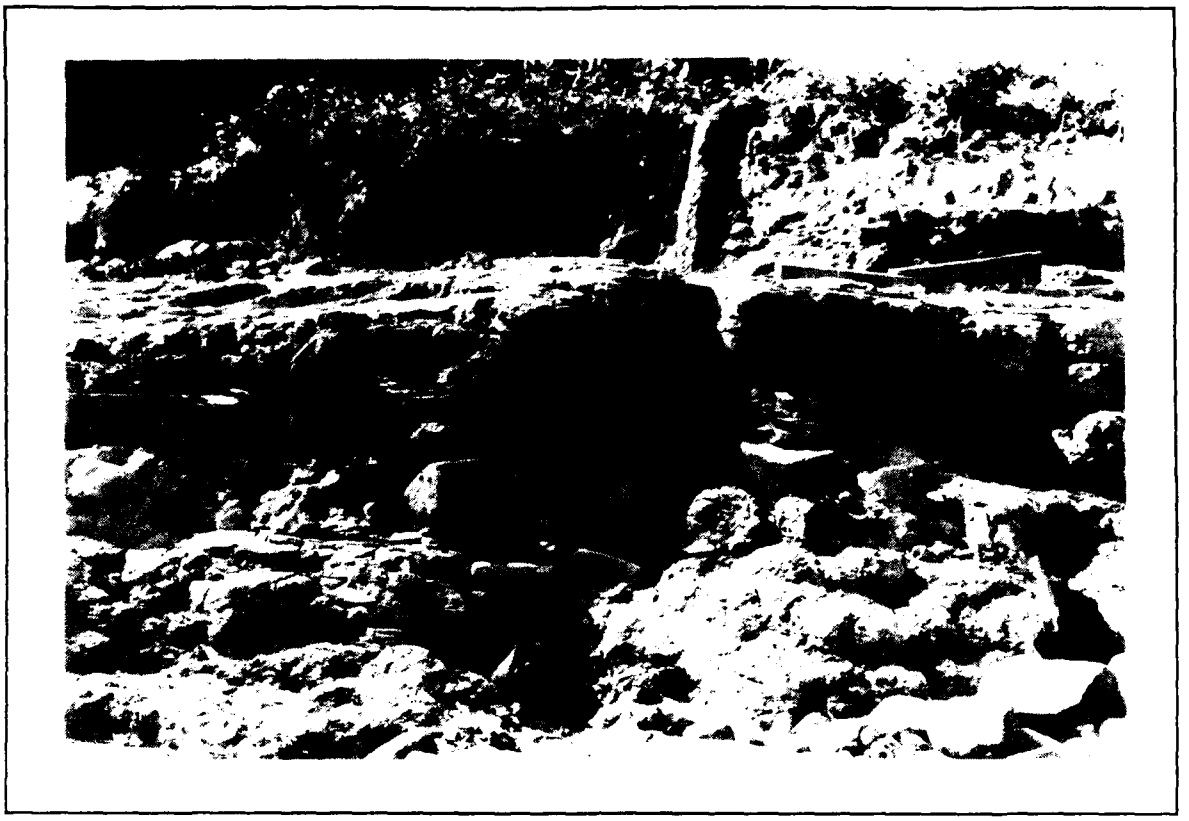


Figure 43. View to south of brick rubble zone in Area 3 of 16 AN 42.

1.0 m above the brick rubble at the base of the second terrace. It was composed of brick rubble aggregate and had several whole bricks attached to one side (Figure 44). The exposed portion of the foundation was ca. 90 cm long and 60 cm wide. No other cultural material was observed eroding out at this level.

In an effort to identify the limits of the cultural deposits in this area two auger borings were excavated on the top bank 5.5 and 15.5 m back from the concrete foundation. The first boring encountered brick fragments and coal slag at 2.8 to 3.0 m in a grayish-brown (10 YR 5/2), oxidized clayey silt. This material is apparently associated with the zone of brick rubble observed in the bankline. The overlying deposits consisted of layers of light, yellowish-brown (10 YR 6/4), sandy silt and brown (10 YR 5/3) clayey silt, but no cultural material was observed in them. The second boring exhibited a similar stratigraphic sequence to the first, but no artifacts were encountered anywhere within the boring.

In addition to the cultural material eroding from the bankline in this area, a few artifacts were present on the surface of the lower bank. These make up the collection listed in Table 14. The two sherds of pearlware and the single sherd of whiteware may date to the early to mid-nineteenth century, but it is unclear whether they are associated with one of the cultural deposits in this area.

Area 4 at 16 AN 42 consisted of a wooden chute running perpendicular to the river

Figure 44. View to south of concrete pier in Area 3 of 16 AN 42.

136 m east of the project area boundary. The structure was eroding from the upper portion of the lower terrace, 3.0 m below top bank. When initially observed, only a small portion of the chute was exposed. In order to record its construction techniques, an area 1.5 m long and 1.0 m wide was cleared down to the top of the chute, and a smaller area within that was excavated to its base (Figure 45). The chute was 29 in (73.7 cm) wide and 12 in (30.5 cm) deep (Figure 46). Its sides were made of 2 x 12 in boards. There was no top present in the cleared area, but nails set approximately 4 in (10 cm) apart on the tops of the side boards indicate that one was once attached. The bottom consisted of 1 x 4 in boards running perpendicular to the sides. A vertical 2 x 4 in board, possibly representing a support post, was present 35 cm beyond the river end of the remaining portion of the chute. A row of vertical 1 x 4 in boards were present 55 cm east of the chute, but their function is unknown.

Six nails were removed from the structure, and all were of the modern machine-cut type in use between 1840 and the 1880s. The only other artifacts found in this area were two sherds of plain whiteware, a sherd of stoneware and a piece of olive bottle glass. Their association with the wooden chute is unclear.

This structure is similar to wooden rice flumes reported by Goodwin et al. (1985:72-77) from 16 SJ 40, a site along the batture of the Mississippi River near Vacherie. The flumes were used to direct water from the river to irrigate the rice fields. The structures at 16 SJ 40 were suggested to date prior to 1888. Based on the history of

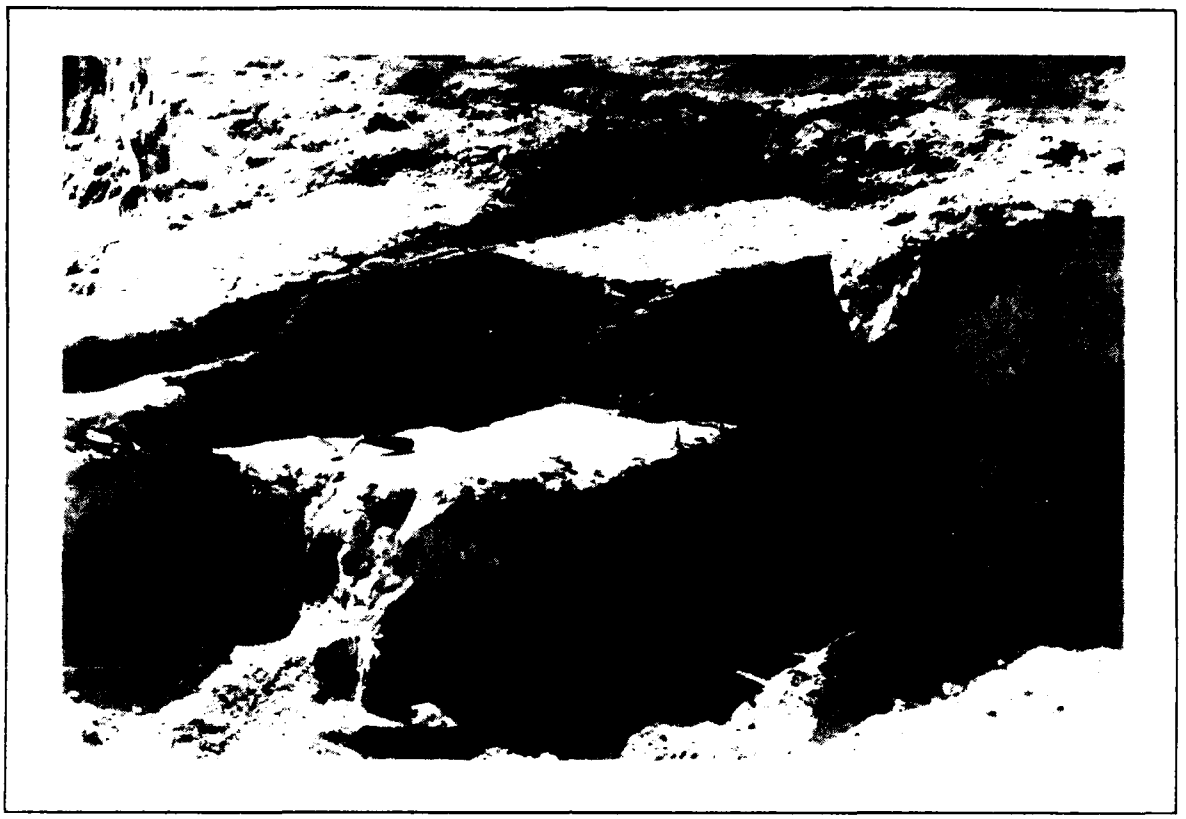


Figure 45. View to southeast of rice flume in Area 4 of 16 AN 42.

rice cultivation on Dugas Plantation, with which the structure appears to have been associated, the example at 16 AN 42 was probably constructed during the 1870s or early 1880s.

The fifth and final area at 16 AN 42 consisted of a light scatter of bricks and a few other artifacts on the surface of the lower bank between 155 and 170 m east of the project area boundary. No source deposit could be identified for this material. The small collection obtained from the area represents at least two periods of occupation (see Table 14). The earlier of these dates to the early- or middle-nineteenth century and includes the sherd of green, shell-edged pearlware and the sherd of flow blue whiteware. The later component dates to the late-nineteenth to early-twentieth centuries and includes the panel bottle fragment and a complete machine-made bottle with an embossed mark of the Fairmont Glass Works in use between 1930 and 1945 (Toulouse 1971:200-201). As at Area 1, this material has now been mixed, and intact deposits are apparently no longer present.

16 AN 43

This site consisted of a large and relatively complex area of structural remains and buried cultural deposits exposed along the riverbank in the eastern half of Section 11 (Figure 47). Material occurred for a distance of 80 m east-west along the bankline and extended at least 25 m north-south. At the western end of the site were two surface

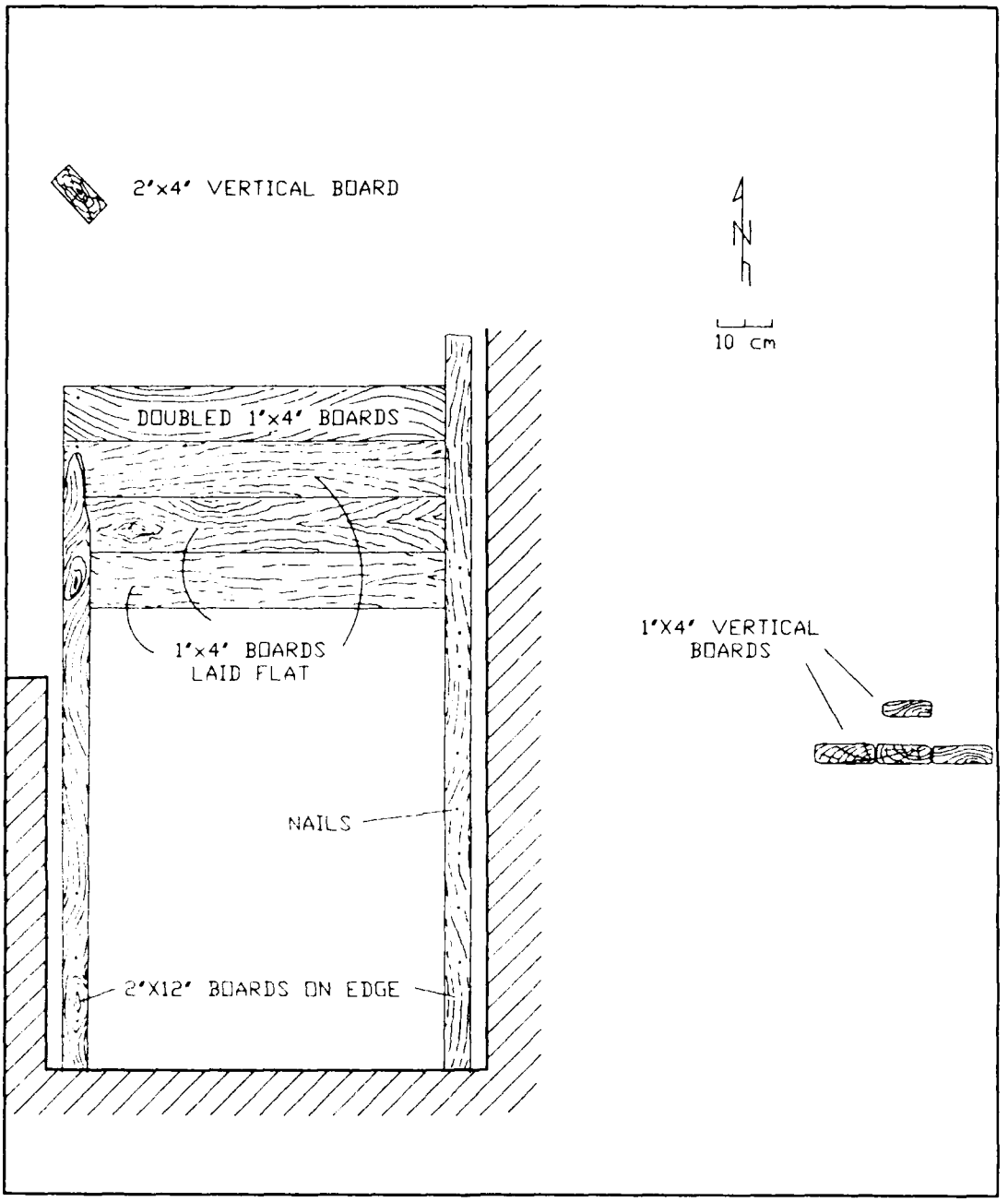


Figure 46. Plan view of wooden rice flume in Area 4 at 16 AN 42.

scatters of coal slag which have been eroded from a zone exposed at the base of the second erosional terrace. The zone occurred 1.65 m below top bank and extended 15 m along the bankline. An auger boring (No. 3) excavated from the top of the second terrace ca. 5.0 m back from its lower edge encountered coal slag at a depth of 95 cm in a grayish-brown (10 YR 5/2), clayey silt. Another boring (No. 1) placed 9 m south of Boring No. 3 revealed a similar stratigraphic sequence, but no cultural material.

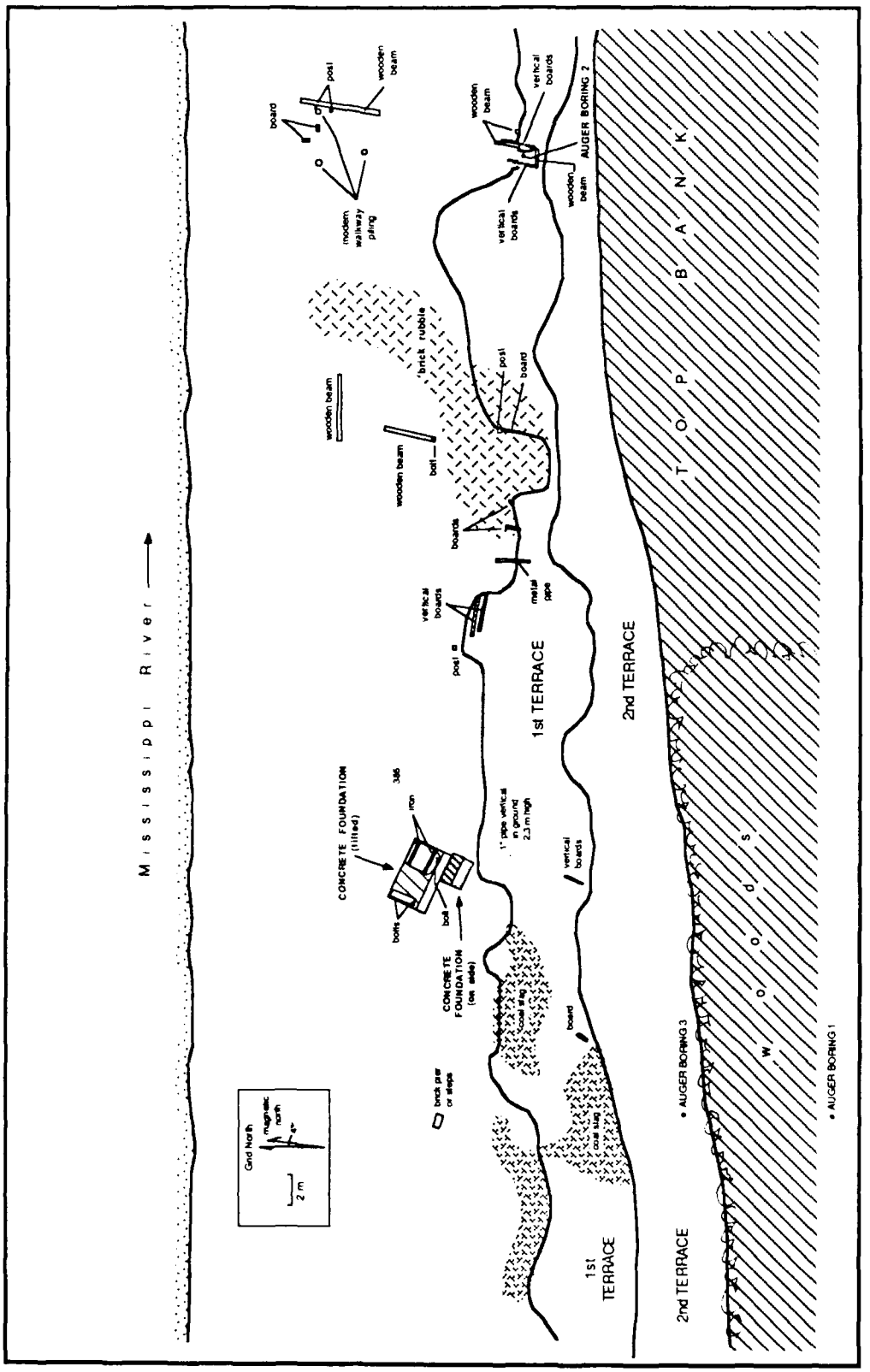


Figure 47. Sketch map of 16 AN 43.

On the lower bank just north of the coal slag was a small brick pier or set of steps which had been redeposited in this location probably by erosion. Also resting on the lower bank about 12 m east of there were two large concrete foundations. The larger foundation was 4.0 m long by 2.0 m wide by 1.5 m high with a pedestal 50 cm high projecting from each end of its top surface (Figure 48). The pedestals contained large bolts which extended upward, probably to mount a steam engine or other large piece of machinery. The concrete on the pedestals showed evidence of having been repaired once. The original material was composed of brick aggregate, while the later addition was of the typical gravel aggregate.

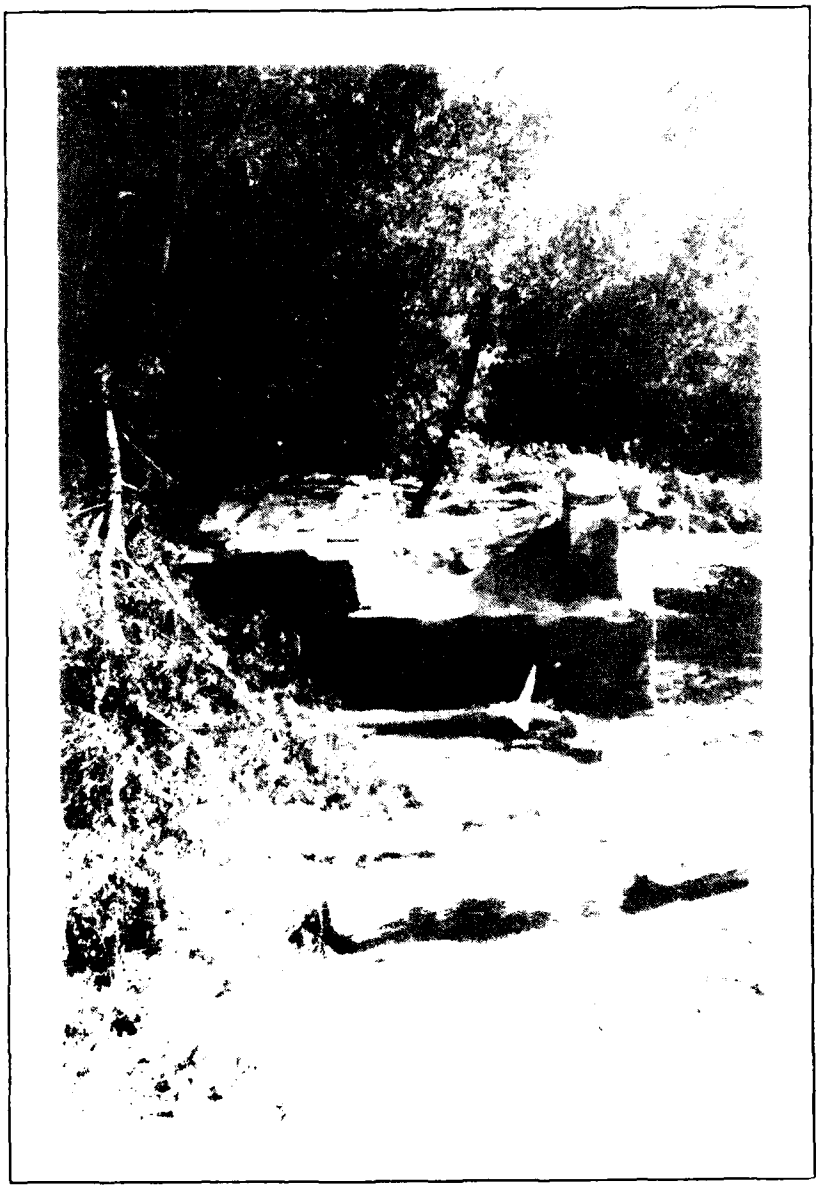


Figure 48. View to southwest of large concrete foundation at 16 AN 43.

The smaller foundation was lying on its side just south of the first. Its exposed portion was 2.0 m long by 1.0 m wide by 75 cm high. Like the larger foundation it was composed of concrete made with brick aggregate and probably served as the foundation for a steam engine or other piece of machinery. Neither of the foundations was in situ, but it seems unlikely that they have moved far as a result of their weight. It is probable that they have simply settled and shifted slightly down the bank because of erosion.

Exposed on the surface of the first terrace south of the concrete foundations were a 1-in diameter iron pipe and a line of boards, both extending vertically from the ground. Approximately 15 m east of there, also on the first terrace, were two parallel lines of vertical boards located about 60 cm apart and each extending about 2.5 m long. Five meters east of that was a large scatter of brick rubble which extended from the first terrace to the lower bank. No source deposit for this material could be identified; however, several horizontal and vertical boards were eroding from the first terrace in this area.

Approximately 10 m east of the scatter of brick rubble, a portion of a small wooden structure was observed eroding from the first terrace (Figure 49). In order to record its construction techniques and aid in its identification, the walls of the structure were uncovered and its interior cleaned out (Figure 50). Only three walls of the structure

Figure 49. View to south of wooden structure at 16 AN 43.

Figure 50. View to southeast of wooden structure at 16 AN 43 after partial excavation.

were preserved, and they enclosed an area roughly 1.5 m east to west by at least 3.4 m north to south (Figure 51). The east and west walls were composed of vertically set 2 x 4 in boards adjacent to one another. Some of the boards in the west wall were replacements for older, more weathered boards. On the interior of the west wall was a 2 x 6 in board lying horizontal on edge. The interior of the east wall contained a 10 x 15 in wooden beam at least 3.2 m long. A rectangular hole 4.5 in by 9.5 in was cut in the beam 2.2 m from its northern end. Both the wooden beam and the 2 x 6 in board along the west wall extended into the bank beyond the south wall of the structure. The south wall was composed of a 6 x 7.5 in wooden beam lying horizontal on top of the larger beam and the 2 x 6 in board. A 2 x 6 in rectangular hole was cut near its center.

In order to determine the nature of the fill within the structure, a shovel test was excavated to a depth of 50 cm within it, and then an auger boring (No. 2) was excavated to a depth of 2.4 m. The shovel test encountered water-laid lenses of grayish-brown (10 YR 5/2), clayey silts and fine sands. The few artifacts present had obviously washed in recently. The auger revealed uniformly grey (10 YR 5/1), sandy silts and clayey silts to a depth of 2.4 m, but no cultural material. The deposits within the structure appear to reflect relatively recent subaqueous deposition.

Lying on the lower bank about 7 m north of the wooden structure was another section

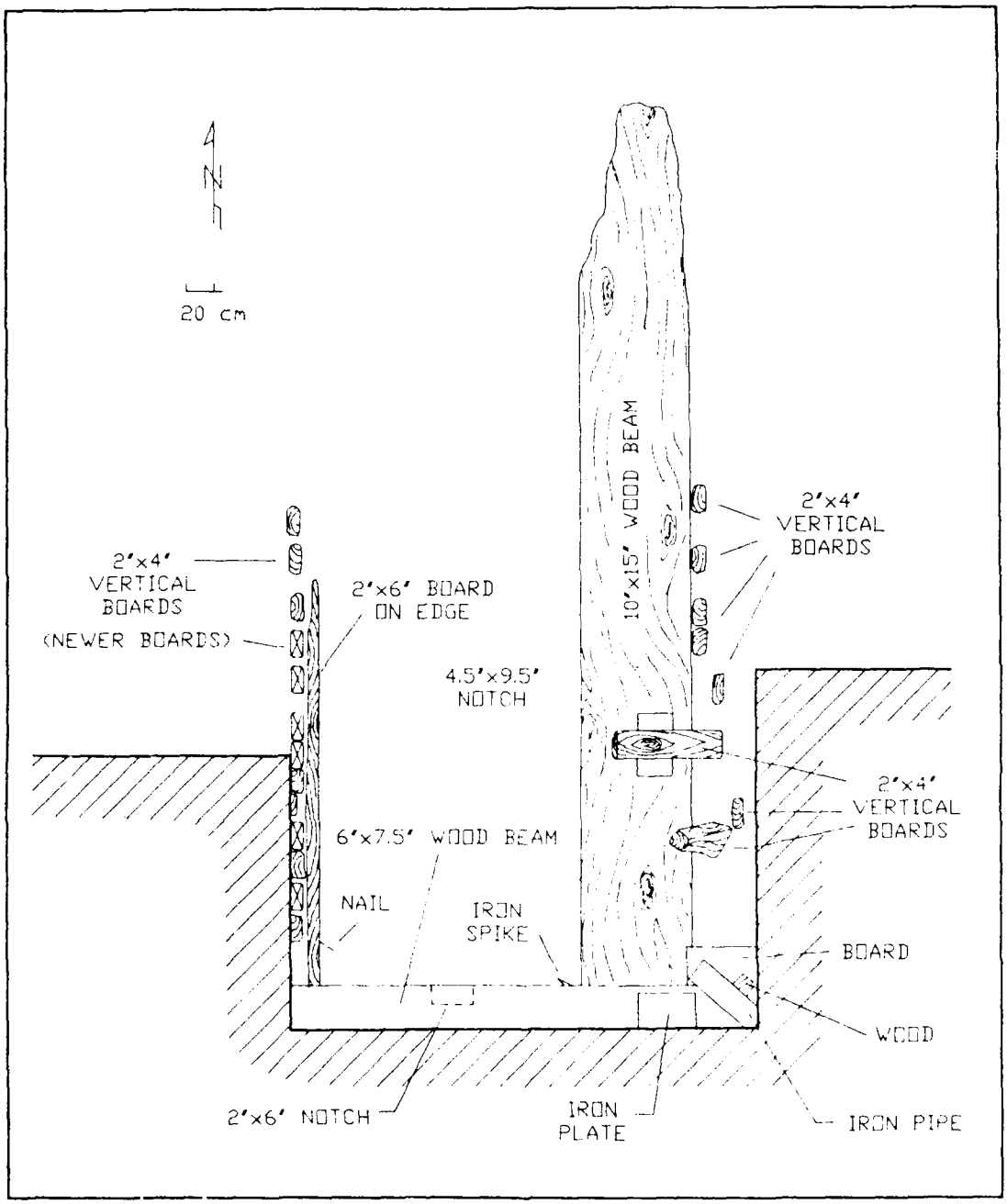


Figure 51. Plan view of wooden structure at 16 AN 43.

of a large wooden beam similar to that found in the east wall of the structure. It may in fact be a portion of the same beam. Also exposed in this area were the upper ends of several vertical boards and posts. The steel pilings of a modern walkway were located in this area, as well, and beyond the walkway the bankline had been altered by construction. It is therefore possible that the site once extended further to the east.

Given the size and complexity of the site, a relatively small number of domestic artifacts were present on the surface of the first terrace and the lower bank (Table 15). The collection obtained includes seven sherds of plain whitewares, three sherds of porcelain, one sherd of semi-porcelain, and several bottle fragments

Table 15. Material Recovered from 16 AN 43.

	SURFACE
CERAMICS	
Refined Earthenware	
Whiteware	
Plate	
plain	3
Flatware	
plain	3
Unidentified	
plain	1
Porcelain	
Saucer	
molded	2
plain	1
Semi-Porcelain	
Plate	
banded	1
GLASS	
Bottle	
Cylindrical	
Unid. mfg. tech	
clear	1
clear green	1
Machine-made	
clear milk bottle	1
Drinking Glass	
clear green	2
Unidentified	
peach	1
METAL	
Nail	
modern machine cut	1
square	1
wire	1
SITE TOTAL	20

(including one from a machine-made bottle) and other pieces of glass. In general, the material appears to date to the early-twentieth century; however, its association with the structural remains in this area is unclear. Two nails were removed from the wooden structure located near the eastern end of the site. One was a modern machine-cut type dating from 1840 to the 1880s and the other was a wire nail in use since the 1880s.

Site 16 AN 43 appears to represent the remains of a saw mill associated with Stella Plantation which was shown in this location on the 1882/83 and 1894 Mississippi River Commission maps. Documentary evidence discussed previously suggests that the mill was built after 1868 and must have ceased operation prior to 1915. The nails recovered from the wooden structure near the eastern end of the site support such a construction date and suggest that the mill was repaired sometime after 1880. The function of this small wooden structure is uncertain, but it may represent a settling tank used to hold river water before it was pumped into the boiler for the saw mill's steam engine. The large, concrete foundations located near the western end of the site probably supported the steam engine.

Wooden structures similar to that at 16 AN 43 have been recorded by Goodwin and Associates in association with rice irrigation systems at two sites (16 SJ 40 and 16 SJB 29) along the Mississippi River (Goodwin et al. 1988a; 1988b). In those instances the structure served as retaining tanks for water being drawn from the river to irrigate nearby fields. Rice was cultivated on Stella Plantation during the 1880s, and it is possible that the present structure was part of a similar irrigation system. Additional excavation will be required to resolve this question.

16 AN 44

This site consists of a large, concrete foundation located on the edge of the top bank in the central portion of Section 10 (see Figure 40). The foundation is similar to the larger of the two located at 16 AN 43, but this example is in place (Figure 52). It is L-shaped, and it measures 4.5 m on one side, 5.25 m on the other, and 74 cm high.

Two pedestals rise from its top surface. The smaller one is 67 cm high and contains four 3/4-in bolts projecting upward from its top. The larger pedestal is 20 cm high and contains six 1 1/4-in bolts. Like the foundations at 16 AN 43, it is composed of concrete made with brick aggregate.

The area in which the foundation is located has been extensively graded and filled in relation to construction of overhead walkways leading to loading docks located in the river near here. The riverbank has been covered with rock and shells, and no cultural material could be located. An auger boring and several shovel tests were excavated on the top bank in the area of the foundation. None of these subsurface tests encountered any cultural material or even evidence of a buried soil horizon. The auger boring revealed relatively homogenous layers of brown (10 YR 5/3), sandy silt and clayey silt to a depth of 2.4 m.

The site is interpreted as the foundation for a steam engine or other large piece of machinery which was associated with a structure shown in this location on the Mississippi River Commission map of 1894. The structure was part of Riverside Plantation and believed to be a warehouse at its landing. It is possible, however, that this was another sawmill, in this case situated on the batture, rather than behind a levee. Recent construction activities have apparently removed any associated cultural deposits or features from this area, leaving the large foundation in place.

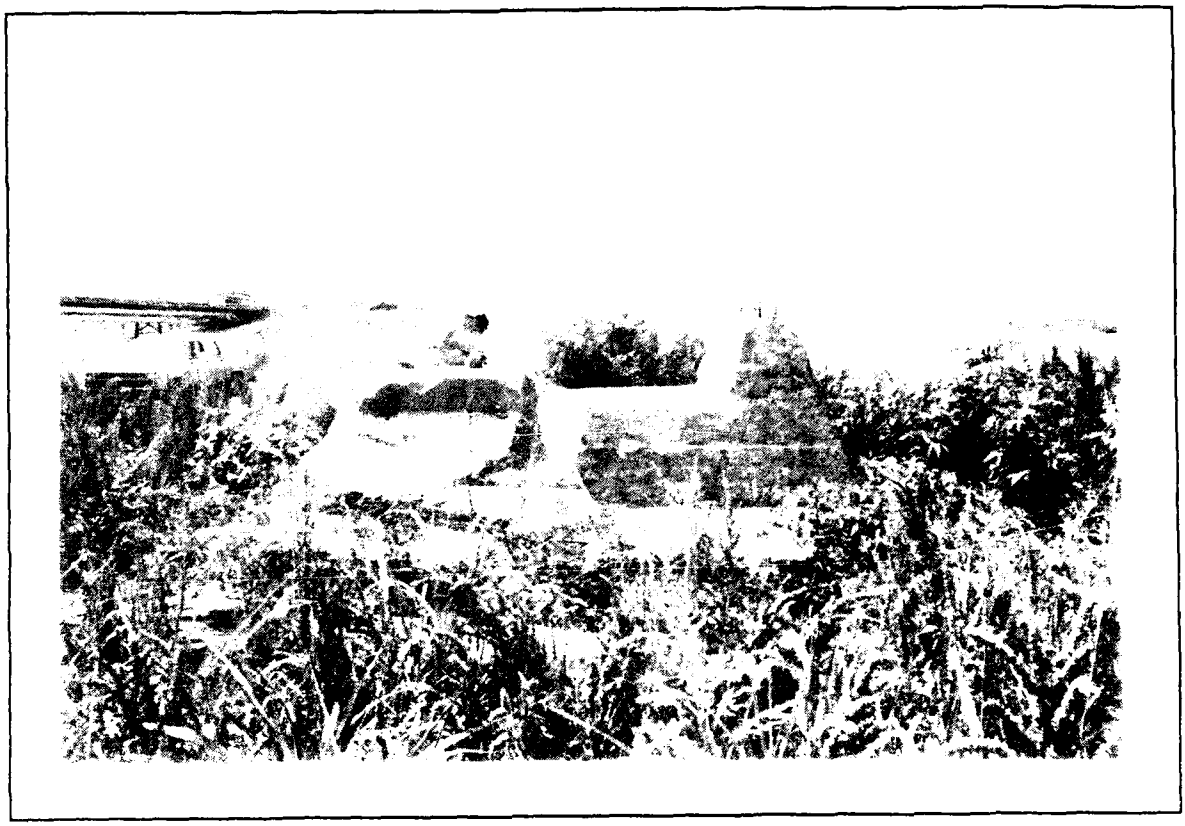


Figure 52. View to south of large concrete foundation at 16 AN 44.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

The present study has utilized a combination of archival and archeological research techniques to examine the history of land use within the four proposed revetment areas and to document the material remains of past human activities. Eleven archeological sites were located during the surveys and two previously recorded sites were reexamined. Table 16 summarizes information on these sites and provides recommendations for their treatment.

Survey of the Arrow Bend Revetment area failed to locate archeological sites or historically significant structures. The only cultural features encountered there were modern camp structures and farm buildings. Recent alluviation rates in this area have been high, and earlier cultural remains, if they are present, are now deeply buried.

Two historic archeological sites, 16 EBR 70 and 16 EBR 71, were located within the Manchac Revetment area, and two previously recorded sites, 16 EBR 40 and 16 EBR 56, were reexamined. Site 16 EBR 40, recorded as a prehistoric shell midden, was located in the proposed access road leading to the revetment area. Test excavations indicated that the site consisted of a deposit of Rangia shells introduced as road fill in the recent past. The aboriginal ceramics previously reported from the site suggest that the shell may have been obtained from a prehistoric shell midden. The site lacks integrity and is not considered significant. Site 16 EBR 56 was recorded, on the basis of documentary evidence alone, as the location of an early-twentieth-century church. The reported site location lies in the borrow pit for the present levee. No cultural material was located in this area during the present research.

Site 16 EBR 70 consists of a concrete machinery foundation of unknown age. It is not in situ and lacks associated cultural deposits. It is not considered significant because of a lack of integrity and limited research potential. The other site located within this area, 16 EBR 71, is a multicomponent historic site. One area contained a sparse surface scatter of late-eighteenth- or early-nineteenth-century ceramics, while an adjacent area included a small buried sheet midden of late-nineteenth- or early-twentieth-century age and an associated surface scatter. Intact deposits could be identified only for the later component, and these were of limited extent. The site is therefore considered to have limited research potential and is not considered significant.

Survey of the Marchand Revetment area located six historic archeological sites, 16 AN 45 through 16 AN 49 and 16 AN 6. All of these sites consist of sheet middens associated with houses which were part of a small community located in this area at the end of the nineteenth century and into the early-twentieth century. Many of the sites are now buried beneath 2 to 2.5 m of more recent crevasse and overbank deposits. The integrity of the sheet midden deposits is difficult to assess, and intact features which might have research potential were not identified at any of the sites. They are therefore not considered significant.

Three historic archeological sites were located within the Aben Revetment area, 16 AN 42, 16 AN 43, and 16 AN 44. The first of these, 16 AN 42, is a large multicomponent site associated with various periods of occupancy on Dugas Plantation. Two areas of the site contain intact late-nineteenth-century rice irrigation structures, one constructed of wood and the other of iron pipe. Another area at the site includes an in-situ concrete foundation and an earlier buried brick rubble zone which are of uncertain age, but probably date to some portion of the

Table 16. Summary of Site Descriptions and Recommendations.

Revetment Area	Site	Description and Assessment	Recommendation
Manchac	16 EBR 40	Shell road, possibly composed of shell obtained from a prehistoric site. Not significant.	No further work
Manchac	16 EBR 56	Location of early-20th-century church. Recorded on documentary evidence alone. Location is in borrow pit for present levee. Nothing found in this area.	No further work
Manchac	16 EBR 70	Concrete machinery foundation; not in situ and no associated artifact deposits; not significant.	No further work
Manchac	16 EBR 71	Multicomponent historic site; small late-18th or early-19th century surface scatter; late-19th or early-20th-century buried sheet midden and surface scatter. Small area of intact material. Limited research potential. Not significant.	No further work
Marchand	16 AN 45	Small late-19th or early-20th century sheet midden. Limited research potential. Not significant.	No further work
Marchand	16 AN 46	Redeposited historic structural remains. Not significant.	No further work
Marchand	16 AN 47	Buried early-20th century sheet midden and partially intact structural element. Limited research potential. Not significant.	No further work
Marchand	16 AN 48	Series of buried 19th or 20th century sheet midden. Limited research potential. Not significant.	No further work
Marchand	16 AN 49	Series of buried early-20th century sheet middens. Limited research potential. Not significant.	No further work
Marchand	16 AN 6	Buried early-20th century sheet midden. Limited research potential. Not significant.	No further work
Vaen	16 AN 42	Large multicomponent historic site. Intact irrigation structures dating to late-19th century. In situ structural element and buried rubble zone probably dating to 19th century. Surface scatter dating to late-18th/early-19th century, late-19th century, and late 19th/early-20th century. Similar irrigation structures have been thoroughly documented by Goodwin et al.(1988) at Vacherie. Remainder of site is believed to have limited research potential.	No further work
Aben	16 AN 43	Intact structural remains and buried cultural deposits associated with 19th-century sawmill. Research potential on technology associated with plantation sawmills.	Additional testing to assess significance.
Aben	16 AN 44	In situ late-19th-century concrete machinery foundation. No associated cultural deposits. Limited research potential. Not significant.	No further work

nineteenth century. Surface scatters within the site area include artifacts dating from the late-nineteenth through early-twentieth centuries. The site is considered to have limited potential because of the previous documentation of similar irrigation structures at a nearby site (Goodwin et al. 1988) and the lack of integrity or limited range of data available from the remaining deposits. No further research is recommended there.

The second site within the Aben Revetment area, 16 AN 43, represents the remains of a sawmill located on Stella Plantation during the late-nineteenth century. It contains intact structural remains and buried cultural deposits; however, the extent of these deposits and their significance is presently unclear. It is therefore recommended that a program of test excavations be conducted at the site in order to assess its eligibility for nomination to the National Register of Historic Places. The first of that program should consist of additional documentary and oral historical research on Stella Plantation and the sawmill. Hopefully, this effort will yield more detailed descriptions of the sawmill or even a photograph of it. Research should also be directed toward the development of a model of the spatial arrangement of plantation saw mills along the Mississippi River. Bryant (1922) and Brown (1946) provide documentary information on the layout of commercial mills in the early-twentieth century, and Pearson et al. (1985) and Whelan and Pearson (1988) present archeological data on this type of site. However, there is little information available on the small non-commercial mills run on plantations.

The actual test excavations should consist of a series of backhoe trenches excavated from the top bank, 2nd terrace, and 1st terrace within the site area. In this case, backhoe trenches are preferred over test units or auger borings because of the depth of recent alluvium in portions of the site and the need to expose the cultural deposits or features sufficiently to determine their nature and integrity. It is suggested that a minimum of five trenches will be required to adequately examine the site. One should be excavated adjacent to the wooden structure at the eastern end of the site, and others should be placed in the areas from which other structural features appear to be eroding. One or two trenches should also be excavated from the top bank to better define the southern limit of the site. During the course of the test excavations, an instrument map of the site should be made and tied into control points on the levee.

The third site located in the Aben revetment area, 16 AN 44, consists of a late-nineteenth-century machinery foundation associated with what may have been a warehouse on Riverside Plantation. The foundation is in situ, but there are no associated cultural deposits. The site is therefore believed to have limited research potential, and no further work is recommended.

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